

HotLeap[®]

Installation and Configuration

Guide V.1.1.



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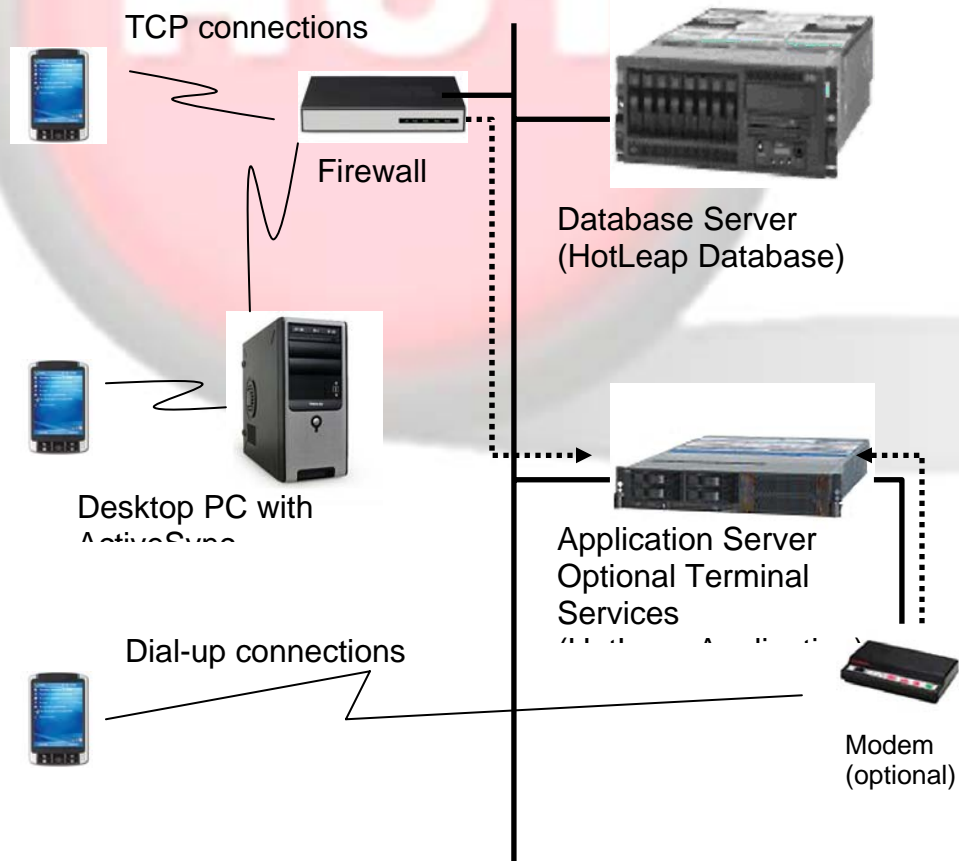
1 Introduction

This guide covers the installation and configuration of the HotLeap core technologies in a best-practices scenario. It is important to note that while network and server systems can be set up in alternate configurations, deviations from this guide should only be done in consultation with a HotButton Solutions support professional.

HotLeap requires one or more handheld computers, an application server to host the HotLeap programs and services, and a database server to store the data from the handheld computers.

This document is for use by only a qualified database administrator.

1.1 Architecture Overview



1.2 System Requirements

The following requirements assume that the Database Server and Application Server are separate physical machines, which is commonly the case when HotLeap is being added to an existing IT infrastructure. This is the recommended configuration.

However, it is *not* a structural requirement that HotLeap be separated into two parts, or that it run on dedicated servers. Several configurations are possible as long as the servers being used have surplus CPU and memory capacity to handle hosting an additional application.

1.2.1 HotLeap Database

The HotLeap database can be hosted on either Microsoft or Oracle platforms. The requirements are as follows:

MS SQL Server

- Microsoft SQL Server 2000 or later
- Mixed-mode authentication enabled

Oracle

- Oracle 9i or later

Operating System

- Windows 2000 Server
- Windows 2003 Server

Additional Requirements

- Fixed IP address



1.2.2 HotLeap Application

The core HotLeap application server software is very resource-efficient and will run on:

Hardware

- Minimum of 256 MB of RAM
- Minimum of 20 GB hard drive
- Minimum of 500 Mhz CPU
- Flash Card reader (to read memory cards used in handheld computers)

Operating System

- Windows 2000 Server (using minimum hardware)
- Windows 2003 Server (using Microsoft-recommended hardware requirements)

Additional Requirements

- Microsoft .NET 2.0 Framework with Service Pack 1
- Microsoft Data Access Components (MDAC) 2.8 with updates
- Oracle Client 9i (if using Oracle database)
- Fixed IP Address

1.2.3 Handheld Computers

- Windows Mobile 2003 or later
- Ability to establish a TCP connection to the HotLeap Conduit Service (over port 15051 by default)
- Microsoft ActiveSync 3.7.1 or later if connecting through a desktop PC via a cradle or USB sync cable



2 Database Installation

The installation sequence requires that the database already exists before running the HotLeap Setup Wizard. HotLeap supports connection to Microsoft SQL Server 2000 or later, or Oracle 9i or later. Follow only the procedure that applies to your specific database server.


This document is for use by only a qualified database administrator.

2.1 Microsoft SQL Server

2.1.1 Database - Core Installation

HotButton provides SQL scripts which will create the HotButton schema in the client database environment. Database scripts can be run using various methods, including from a command line using `osql` or `sqlcmd`, from within Enterprise Manager, or from within Query Analyzer. If you are using MS SQL Server 2005, please note that SQL Management Studio combines the functionality of Enterprise Manager and Query Analyzer into one.

Regardless of the method used, execute the following installation scripts from the HotButton product CD:

 **Note:** *Specific version numbers included in your installation package will differ based on revisions to the database. Version numbers are indicated by ###*

- MAARS_CS_###.sql

If the scripts executed without error, execute the following additional scripts dependent on which system you will be running:

- HotLeap: DPL_CS_###.sql
- Detection: DTCH_CS_###.sql
- Production Volume Reporting: PVR_CS_###.sql



MS SQL 2005 users may need to edit the “MAARS_CS_###” script to increase the complexity of the default passwords to meet Microsoft’s enhanced default security policy.

The HBS database is installed on a SQL 2000 or SQL 2005 database. In order for the HotLeap components to function after installation, a database needs to be installed prior to the software installation.

- ❗ **Note:** If the database needs to be renamed from the default (HBSPA) then the SQL script will need to be opened in a text editor and all instances of HBSPA will need to be renamed via global find and replace.

Installation steps for SQL 2000 and SQL 2005

1. Locate most recent DB script ex. *MAARS_CS_###*
2. Run SQL 2000, or SQL manger studio “SSMS” in SQL 2005
3. Log in prompt will appear
4. Select server type, server name to connect to and windows authentication is defaulted and does not need to be changed
5. Open SQL server group server 2000 only
6. Go to Tools> SQL Query Analyzer. A new window opens. In 2005 you just drag/drop into existing window
7. Drag and drop newest script into right hand window, or click new query in 2005. Or you may go to file>open and navigate to script
8. Another connection prompt will appear asking you which server you need to connect to and windows auth.
9. Click connect
10. Click Execute or the play button in 2000
11. Wait for script to execute and close SQL 2005


2.1.2 Renaming for SQL

HBSYS

The schema name is set to HBSYS and this will need to be renamed in every instance to the schema name set up during the database set up if it has been changed. Every INSERT, UPDATE, or DELETE statement needs to be renamed to the new schema name.

- ❗ **Note:** To expedite the renaming process, use the “find” and “replace all” function in Word or Notepad.




 **Note:** “HBSYS” is the default schema name. You may keep this name the same as there is no harm in doing so.

HBSMAARS

The main database name is set to HBSMAARS and you will find statements such as “use HBSMAARS” in the scripts. Occurrences of this are few however. Rename as desired.

HBSARCHIVE

The archive database name is set to HBSARCHIVE. This can be renamed by a database administrator by changing the HBSarchive tag in the script.

 **Note:** It is important to note that Oracle Server and SQL Server use the terms “schema” and “database”, however each have different definitions. Be aware of the variations of these terms.

2.1.3 Setting Passwords

The database installation scripts create two user accounts and passwords for the HotLeap application:

- HBCustomer
- HBSYS

The default passwords used may vary with the software version, but can be seen by opening the MAARS_CS_###.sql file.

You can change these passwords using SQL Server Management Studio (MS SQL Server 2005) or Enterprise Manager for Oracle Database Server.

2.2 Oracle Server

2.2.1 Database Core Installation

When running the MAARS script you will be prompted for some information:

- Schema name – this is HotButton Schema that will house all HBS data.
- Three Tablespace names: the default values will be in brackets. It is recommended you use these.



-
- Schema name for archive database default is in brackets. It is recommended you use the default here.

Installation scripts can be run using SQLplus:

i.e. SQL>@FILENAME.sql

Run the following script:

- MAARS_CO_###.sql

If the scripts executed without error, execute the following additional scripts dependent on which system modules you will be running:

- HotLeap: DPL_CO_###.sql
- Detection: DTCH_CO_###.sql
- Production Volume Reporting: PVR_CO_###.sql

2.2.2 Changing Passwords

Passwords can be changed as with any Oracle Database using the following command:

i.e. SQL>alter user USERNAME identified by PASSWORD;

3 HotLeap Application Installation

HotLeap is a set of individual modules that together form the data collection solution. The Installation Wizard will let you install/reinstall the individual components as needed. However, the default installation options should be used for a new installation.



-
- **Note:** The HotLeap Database must already exist prior to installing the application.

3.1 Main Install

3.1.1 Preparation

If there is a previous install of HotLeap on the computer, please do the following:

1. Make a copy of the Conduit Service, OrgAdmin, Setup, Universal Translator Service, Bullseye, and Notification Service config file, and the set.dat file (located in the ZS folder of the commissioning source folder).

Typically, depending on the version, this would be similar to:

C:\Program Files\HotButton Solutions\HBS_HotLeap\HBS_HotLeap_V0.4.1.0\ZS

2. Remove any previous installs of Conduit Service, Universal Translator Service, OrgAdmin, Bullseye, Notification Service, and HotLeap handheld solution.

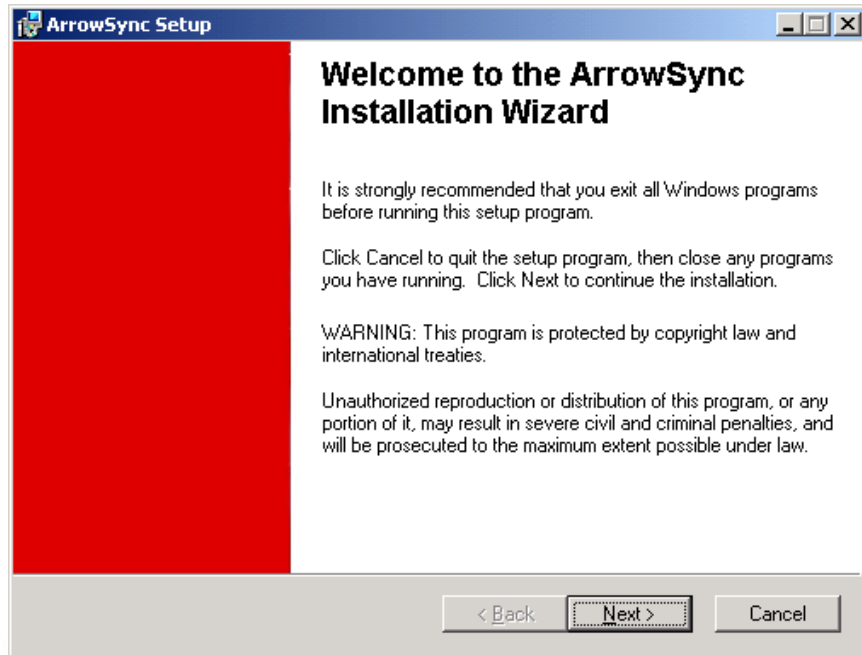
You can accomplish this either by running your original .msi file and selecting the “remove” option, or from the Control Panel.

3. Copy the new .msi installation file to a readily accessible location on the computer (optional).

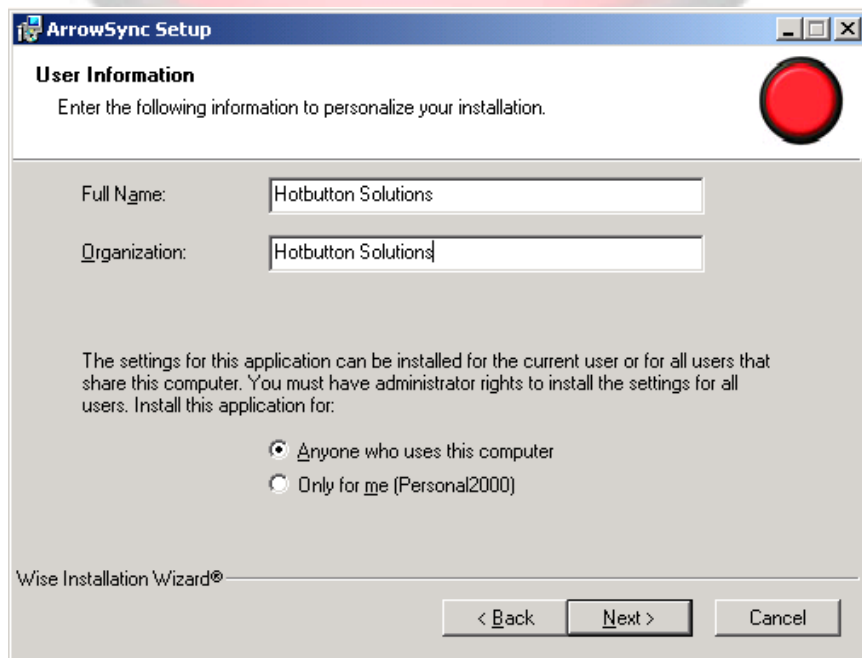
3.1.2 Installation Wizard

1. To start the installation process for the HotLeap Solution, run or double-click the .msi file. The welcome screen of the installation wizard will then be displayed. Click **Next**.

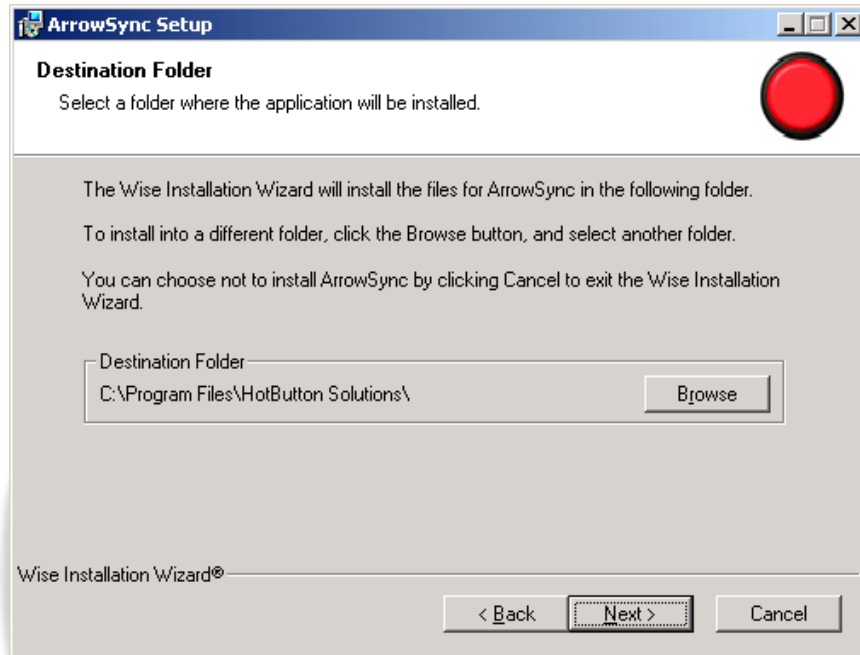




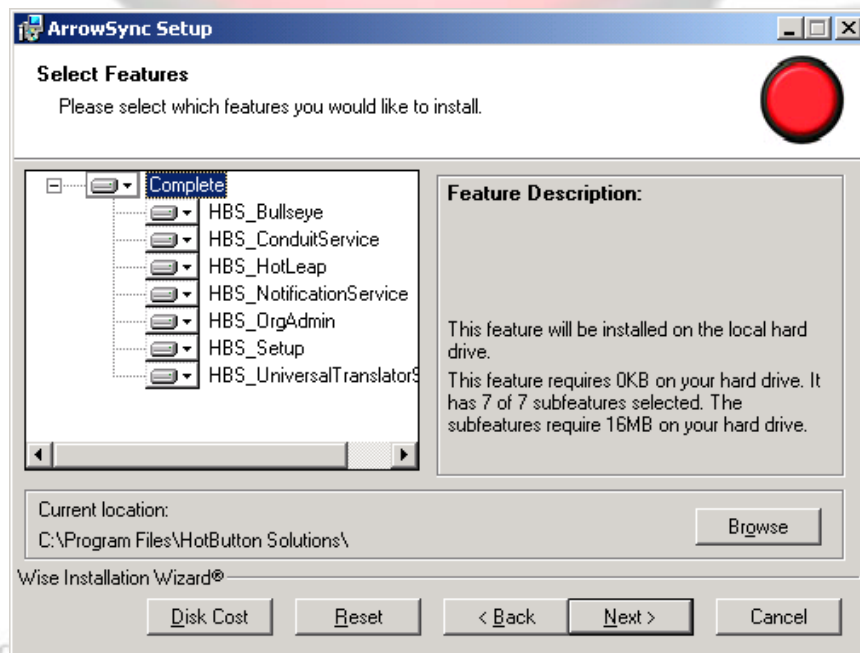
2. The User Information page allows for the personalization of the installation. Confirm/enter the user information so that it is accurate, and specify if HotLeap will be used by **Anyone who uses this computer** or the person listed under **Full Name**. By default, **Anyone who uses this computer** should be chosen. Click **Next**.



3. The Destination Folder page allows the user to select where the application will be installed. By default, this is set to C:\Program Files\HotButton Solutions. To do this, click on Browse and navigate to the appropriate folder. Click **Next**.

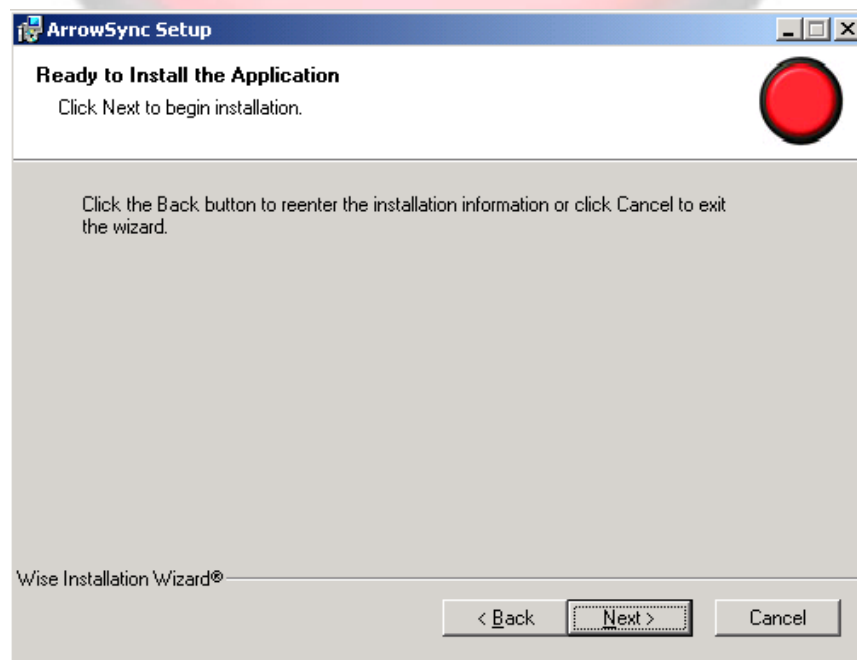


4. Under the **Select Features** page, choose the features to install. By default, everything is installed. It is strongly recommended you keep the defaults unless re-installing a specific component only. Click **Next**.



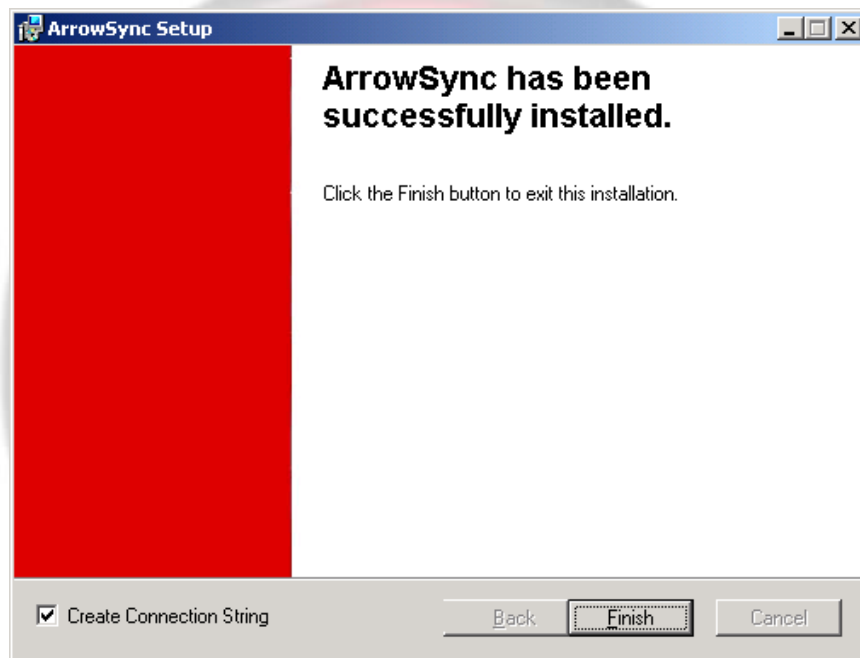
Feature	Requirement
HBS_Bullseye: This is a reporting tool. It allows users to select a date range for any specific data point and also provides a way to generate a .CSV file that can be imported into Excel for further manipulation.	Optional
HBS_ConduitService: This is the network listening service to which all handhelds connect to. It also processes all the data sent from the handhelds and provides data back to the handhelds.	Required
HBS_HotLeap: This is the handheld application software. It is needed to create a "Commission" (a folder that needs to be copied to the handheld device).	Required
HBS_NotificationService: This software component can be configured to send emails to alert when errors occur in the system.	Required
HBS_OrgAdmin: This software component is the Administration Manager for the software.	Required
HBS_Setup: This allows for the pre-configuration of the database connection and creates an initial 7 day license.	Required
HBS_UniversalTranslator: This tool is used to process data and synchronize it with third party systems.	Required for 3 rd party integration

5. The **Ready to Install the Application** page signifies that the configuration of the installation has been completed. If all the information entered is correct. Click **Next**.



-
- The last screen of the Setup Wizard indicates that the setup is complete. Once **Finish** is clicked, the installer will automatically run the Configuration Wizard to create the connection strings for all of the HotLeap components (OrgAdmin, Universal Translator Service, Conduit Service, Bullseye, and Notification Service).

If for any reason you do not want to create the connection string, uncheck the **Create Connection String** checkbox located on the bottom left corner of the page.



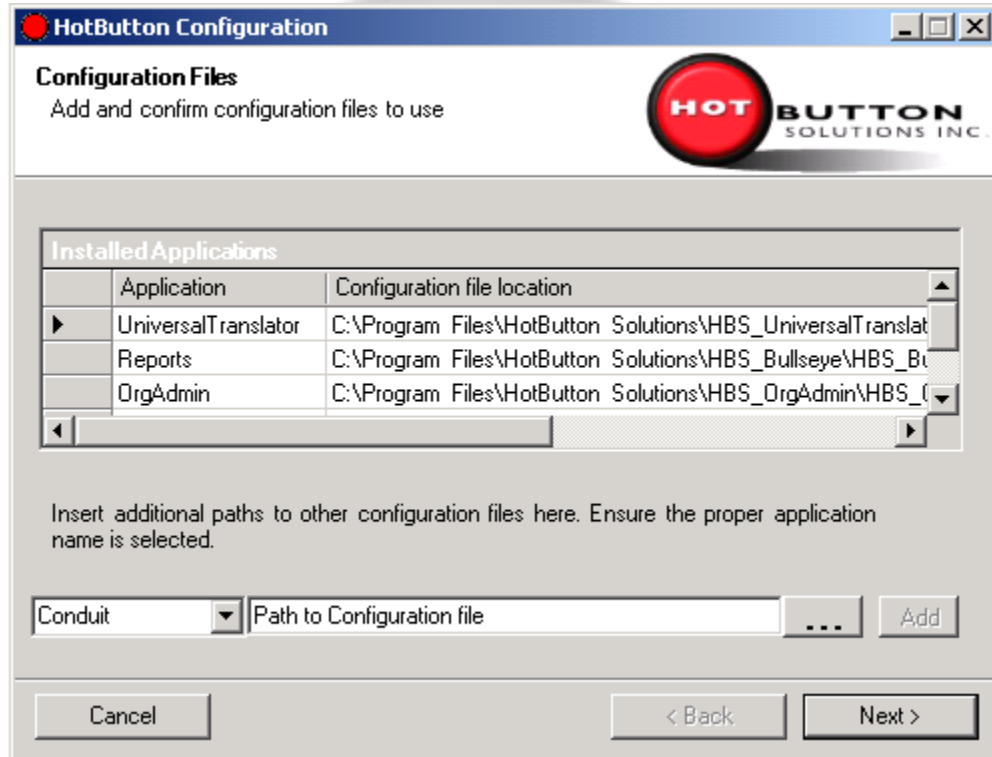
- After installation, a series of configuration screens will appear, allowing the user to alter basic file paths if the defaults are not acceptable.

See the next section for information on changing these.



3.1.3 Configuring File Paths

HotLeap creates a default pre-configured file for each of the HotLeap components. In some scenarios, such as testing or disaster recovery, you may wish to point the various components to a different set of configuration files. You can change the path to each configuration file if necessary.

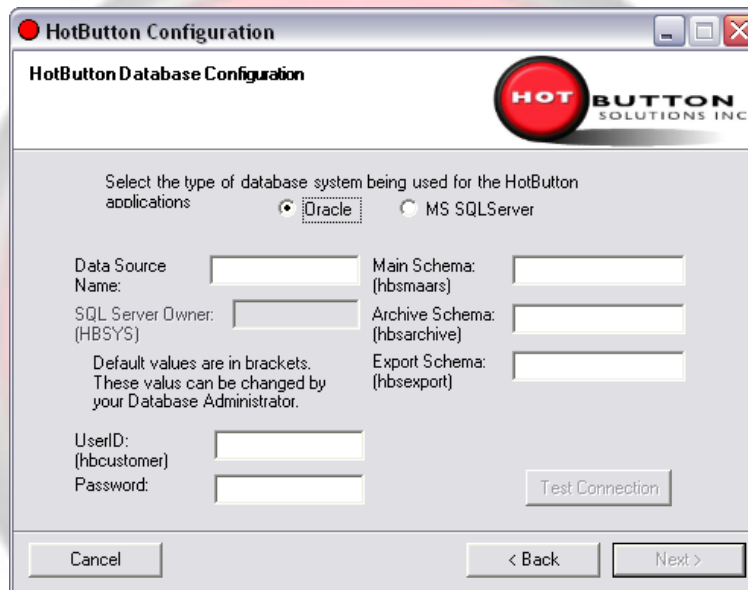


3.1.4 Configuring Database Link

The process of linking to the database varies slightly depending on whether MS SQL Server or Oracle is used.

1. Select the database type.
2. Supply the appropriate database-connection settings.

Oracle Database selection:



The screenshot shows a window titled "HotButton Configuration" with a sub-header "HotButton Database Configuration". The window features the HotButton Solutions Inc. logo. Below the logo, there is a section for selecting the database type, with "Oracle" selected via a radio button and "MS SQLServer" unselected. The form contains several input fields: "Data Source Name", "SQL Server Owner: (HBSYS)", "Main Schema: (hbsmaars)", "Archive Schema: (hbsarchive)", "Export Schema: (hbsexport)", "UserID: (hbcustomer)", and "Password:". A note states: "Default values are in brackets. These values can be changed by your Database Administrator." At the bottom, there are buttons for "Cancel", "< Back", "Next >", and "Test Connection".

In the new set up screen the following fields need to be filled:

- Data Source name
- UserID
- Password
- Main Schema
- Archive Schema
- Export Schema

Note: the default values are listed in brackets preceding the fields



SQL Database selection:

The screenshot shows a window titled "HotButton Configuration" with a sub-header "HotButton Database Configuration". The HotButton logo is in the top right. The main text says "Select the type of database system being used for the HotButton applications". There are two radio buttons: "Oracle" (unselected) and "MS SQLServer" (selected). Below this are several input fields: "Data Source Name:" (empty), "SQL Server Owner: (HBSYS)" (empty), "Initial Catalog: (hbsmaars)" (empty), "Archive Catalog: (hbsarchive)" (empty), "Export Catalog: (hbsexport)" (empty), "UserID: (hbcustomer)" (empty), and "Password:" (empty). A "Test Connection" button is to the right of the password field. A note states: "Default values are in brackets. These values can be changed by your Database Administrator." At the bottom are "Cancel", "< Back", and "Next >" buttons.

In the new set up screen the following fields need to be filled:

- Data Source name
 - SQL Server Owner
 - UserID
 - Password
 - Main Schema
 - Archive Schema
 - Export Schema
3. Click **Test Connection** to verify your settings.
 4. Click **Finish** to complete setup and exit the configuration window. You are now finished with the default setup. Additional settings may be required to achieve a particular system behavior.

The HotLeap License window will display with license details.



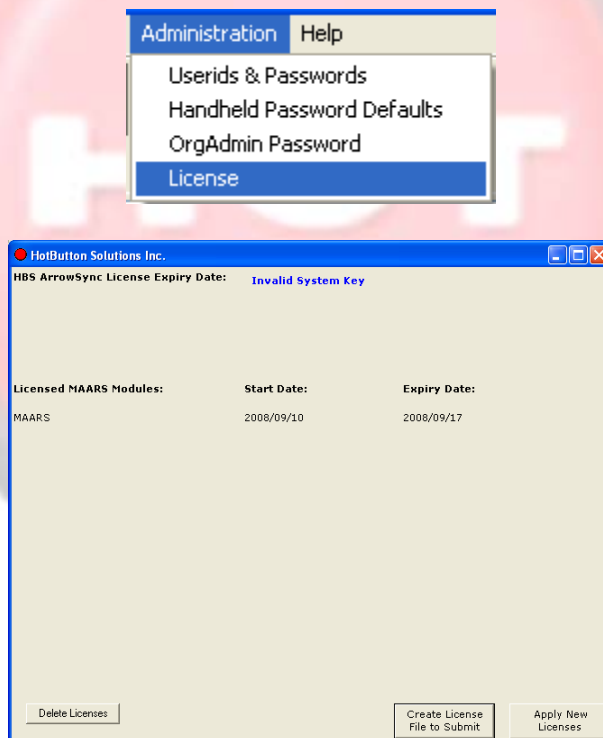
3.2 Licenses – Creating and Applying

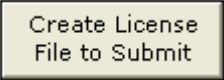
Skip this section if installing HotLeap with a valid license that is already activated.

When installed for the first time OrgAdmin will create a basic seven day license for initial use. During these seven days it is required that a license file is submitted to HotButton Solutions for creation and application. There are two license levels: Regular and Enterprise. Please contact HotButton Solutions for information on these licenses.

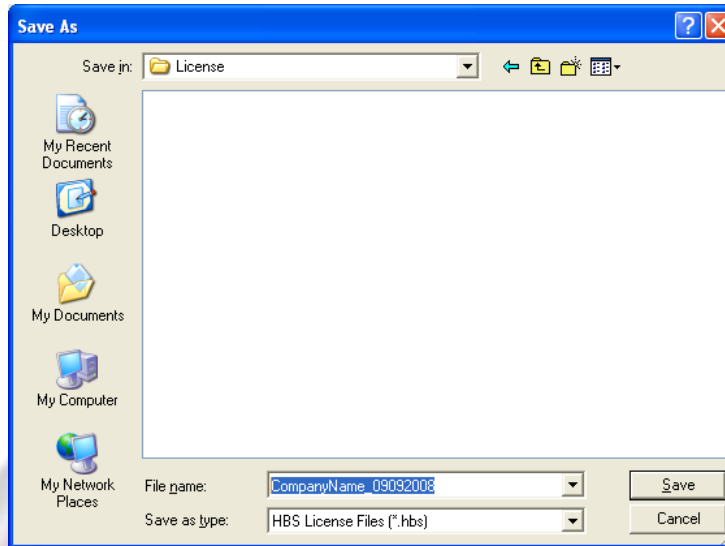
3.2.1 Creating a license file

1. Go to **Administration** and click on **License**.

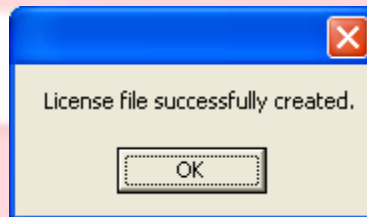


2. Click 
3. Create a folder in C:\Programs\HotButton Solutions titled **License** (if one is not already created).
4. Name your license file as follows: `CompanyName_09092008`
 - Start with your company name i.e. EnCana.
 - Add and underscore “_”.
 - Add the date MMDDYYYY no spaces, dashes, or slashes.





- Click 




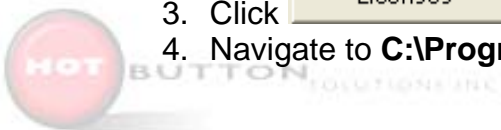
3.2.2 Sending License File

1. Open Email program.
2. Create new email and address to HotButton Support person (check contact information provided at time of installation).
3. Attach newly created license file by navigating to **C:\Programs\HotButton Solutions\License\CompanyName_09092008.hbs**.
4. Send email.

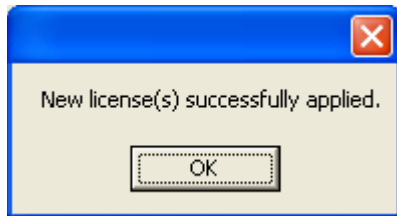
3.2.3 Applying License File

The license file will be emailed:


1. Open email and save attached license file to **C:\Programs\HotButton Solutions\License**
2. In OrgAdmin go to **Administration** and click on **License**.
3. Click 
4. Navigate to **C:\Programs\HotButton Solutions\License\...**



-
5. Select license file and click .



6. The new license is applied.

 **Note:** You may need to restart the OrgAdmin application before the new license takes effect.

3.2.4 Enabling PVR and Dectechtion

Some additional steps will need to take place before logging in to OrgAdmin if additional licenses for third party integration to PVR or Dectechtion have been purchased. The configuration file (config file) for the Universal Translator will need to be adjusted to turn third party functionality on. For PVR the same steps need to happen within the OrgAdmin config file as well.

1. To access the Universal Translator file go to the HotButton Solutions folder that was created when HotLeap was installed. The default is **C:\Program Files\HotButton Solutions** however this may have been changed during installation. The folder name is **HBS_UniversalTranslatorService**.
2. Open the **HBS_UniversalTranslatorService** folder.
3. Open **HBS_UniversalTranslatorService.exe.config** in Notepad or another text editing application.
4. You will need to remove comment brackets from some lines of code. To do so look for a bracket preceded by an exclamation point and the two dashes as follows: **<!--**

The code following is inactive up to the two dashes preceded by a bracket as follows: **-->**

The line of code in between these will become active when the comment symbols have been removed.

<!-- CODE HERE -->



3.2.5 PVR license

1. Uncomment fields CGI connection string, mode string. Delete what is shown in **red**.


```
CGI Connection String: <!--<add key="CGIConnectionString"
value="" />→
CGI Mode string: <!--<add key="CGIModeString"
value="ORACLE:" />→
```

The connection string will be automatically added when the Setup program has been run again. The Setup program will be with the HotLeap package.

2. Set the CGI mode string database type with the name of the schema ex:

Oracle:hbmaars

```
<add key="CGIModeString" value="ORACLE:PVR_NAME_HERE" />
```

 **Note:** For SQL enter "SQLserver**NAME**" (enter real name where bolded letters are).

3. Uncomment - add from "interval update":

```
<!--<add from="InternalUpdate" schedule="45" in="M" /> →
```

4. Uncomment PVR schedule:

```
<!--<add to="PVR" schedule="30" in="M" />→
```

For PVR you will need to access the OrgAdmin Configuration file as well.

The OrgAdmin folder name is: **HBS_OrgAdmin**.

Open the **HBS_OrgAdmin.exe.config** file and follow the first two steps as noted above.

Save all changes (ctrl+S)

Rerun HotLeap Setup program located in the HotButton Solutions folder where HotLeap was installed to populate the uncommented out fields.



3.2.6 Detection License:

1. Uncomment and add Detection URL that HBS needs to contact to push Detection data to. If you do not have a Detection URL contact Detection.

Example: `http://detchtionurl`

```
<!--<add key="DetectionURL" value="URL HERE" />→
```

2. Uncomment Detection export section

```
<!--<add to="DETECHTION" schedule="30" in="M" />→
```

3. Uncomment Detection timeout

- Save all changes (ctrl+S)
- Check that all services are running (See Post-install test procedure section)
- **Note:** *If you change the config file you will need to restart the Universal Translator service. See next section on how to access services.*

3.3 Post Install Test Procedure

In the event that OrgAdmin or one of its functions does not work properly the following test procedure is recommended to ensure that the applications are running correctly.

1. Run services on all components of HotLeap so the config files will log errors:

- **Note:** *This needs to be done in Windows Classic view.*

Go to: **Start > Control Panel > Administrative Tools > Services**

There should be HotLeap components on the list all starting with HBS: Conduit, Notifier, and Universal Translator (only if working with PVR or Detection).



```
HBS_ConduitService
HBS_NotificationService
HBS_UniversalTranslatorService
```



Start these components by highlighting them and clicking on [Start the service](#) at the top left of the Services screen.

Close the services window when finished steps above.

2. Check logs:

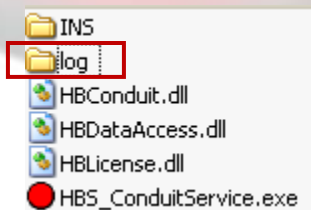
Check the log file to ensure there are no errors being reported.

To check the log files you need navigate through to the paths that were assigned while setting up the config files. If you do not know where the log file is, navigate to the config file for each component (Conduit, Notifier, UT) and check the "LogFilePath" row. As per the screen shot below the default is in the HotButton Solutions folder on the C drive.

Default path is: **C:\Program Files\HotButton Solutions\HBS_ConduitService\log**

```
<add key="HBConnectionString" value="1ec613c6be77022fd979578f86babceb13967879800822036f6fa2457c6b69d617a7609cf16f1a88d389693dbaf75d68ea4" />
<add key="HBModeString" value="ORACLE:hbcasey" />
<add key="PortNumber" value="15051" />
<add key="LogFilePath" value="C:\Program Files\HotButton Solutions\HBS_ConduitService\log" />
<add key="ImpFilePath" value="C:\Program Files\HotButton Solutions\HBS_ConduitService\imp" />
<add key="InsFilePath" value="C:\Program Files\HotButton Solutions\HBS_ConduitService\ins" />
<add key="InsFileName" value="HBSetup.exe" />
<add key="AutoClean" value="TRUE" />
<add key="CheckUpdateConflict" value="FALSE" />
<add key="LogLevel" value="5" />
```

Inside the "log" folder is a .txt file that lists any errors. If the install is successful there should be no errors here and only the following: "HBS "ServiceNameHere" 4.1.3154.19689 started at 2008-09-19 08:44:18"



3. The following should be done after a full review of the **Administrative Guide** and **Handheld User Guide**:

- Commission Handheld.
- Assign Runs.
- Run HotLeap on a handheld.
- Restore Database on handheld and ensure run assignment is still there.
- Enter readings.
- Sync handheld.
- Verify readings have exported.



3.4 HotLeap Configuration

The configuration file 'set.dat' is located under the C:\Program Files\HotButton Solutions\HBS_ HandheldSolutionName \HBS_ HandheldSolutionName _V#.##.#ZS folder.

The settings in the "set.dat" file are as follows:

Section	Key	Value
Probe Settings	Type	The type of probe to use for scanning tags. This key is set in the Probe Settings dialog. 0 = Not Using a Probe 1 = Point Six Ha7T 2 = MacSema ButtonLink
GUI Settings	Graph Zoom	The amount of zoom to use when displaying summary graphs. Used to emphasize small variations in the data. Recommended value: 25
GUI Settings	Asset List Mode	The order of columns when viewing assets at a site. 0 = Device, Name 1 = Name, Device
GUI Settings	Device Colour	RGB value to use for highlighting equipment headers in log sheet data entry screens. Each RGB value is an integer from 0 to 255. B is the MS byte, G is the middle byte, R is the LS byte. Default value: 14211288
GUI Settings	Label Colour	RGB value to use for highlighting labels in data entry screens. Each RGB value is an integer from 0 to 255. B is the MS byte, G is the middle byte, R is the LS byte. Default value: 14211288
GUI Settings	Font Colour	RGB value to use for the font colour in data entry screens (for coloured font labels). Each RGB value is an integer from 0 to 255. B is the MS byte, G is the middle byte, R is the LS byte. Default value: 192
MacSema Settings	Comport	The COM port to use for the MacSema ButtonLink probe.

		Recommended value: 1
MacSema Settings	BaudRate	The baud rate to use for the MacSema ButtonLink probe. Recommended value: 115200
Sync Settings	PacketSize	The packet size (in kilobytes) to use during synchronization. This key is set in the Sync Settings dialog. Recommended value for dialup: 4 or 16 Recommended value for high speed WAN: 64
Sync Settings	CManager	Specifies whether or not to use the Connection Manager when starting a sync session. This key is set in the Sync Settings dialog. This setting should only be enabled if using a modem. 0 = do not use Connection Manager 1 = use Connection Manager
Sync Settings	Compress	Specifies whether or not to use compression in a sync session. This key is set in the Sync Settings dialog. Compression should always be enabled. If compression causes synchronization errors, then it can be disabled. 0 = do not use compression 1 = use compression
Sync Settings	Encrypt	Specifies whether or not to use encryption in a sync session. This key is set in the Sync Settings dialog. Encryption is not supported in the current release. 0 = do not use encryption 1 = use encryption
Sync Settings	Port	The port number to use for a sync session. This value must be set to the same port number that the conduit server is using. This key is set in the Sync Settings dialog. Recommended value: 15051
Sync Settings	Host	The host name, or IP address, of the conduit server. This key is set in the Sync Settings dialog.
Sync Settings	StatusTimeOut	Specifies whether or not to send Status messages during periods of inactivity. It is a good idea to send

		<p>a Status message every 10 seconds since this is one of the few ways to check for a disconnected socket on Windows CE. However, there may be instances where delays of 10 seconds or more are normal and should be ignored.</p> <p>Recommended value: 10 (seconds).</p> <p>Values below 10 will turn off Status messages entirely.</p>
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3.5 Conduit Server/Service Configuration Settings

Key	Value
HBConnectionString	<p>Specifies the connection between the conduit and the HotButton database.</p> <p><i>For SQL Server, use this:</i> Data Source=AAA; initial catalog=BBB; user id=CCC; password=DDD</p> <p>Where: AAA = name of SQL Server (i.e. the computer name) BBB = name of HotButton database (i.e. HBSxxx) CCC = name of user account that has access to HotButton database (i.e. hbcustomer) DDD = password for user account (i.e. bearpit)</p> <p><i>For Oracle, use this:</i> Data Source=AAA; user id=CCC; password=DDD</p> <p>Where: AAA = the Oracle Net Service Name for the HotButton database CCC = name of user account that has access to HotButton database (i.e. hbcustomer) DDD = password for user account (i.e. bearpit)</p>
HBModeString	<p>Specifies both the type of database to connect to and the schema to use when accessing the HotButton database objects.</p> <p><i>For SQL Server, use this:</i> SQLSERVER:EEE</p> <p><i>For Oracle, use this:</i> ORACLE:EEE</p> <p>Where: EEE = the schema for the HotButton database objects (i.e. HBSYS)</p>
PortNumber	<p>The TCP/IP port number that the conduit should listen on for incoming connection attempts. The handheld application must be configured to use this same port number.</p>

	Recommended value: 15051
LogFilePath	<p>The directory path to use for storing log files. The directory path can be specified using a relative or absolute path. A relative path, such as "log" or "logfiles\conduit", is always relative to the location of the conduit executable. For the conduit service, the conduit executable is located in the "Windows\System32" directory. Thus any relative file paths will be from that directory. Alternatively, an absolute file path can be used to specify any location for the log files as such: "C:\Program Files\HotButton Solutions\HBConduitService\log". Whether using relative or absolute paths, the conduit will create the directory path before any log files are generated.</p> <p>See the additional notes on log files included at the end of this document.</p>
TmpFilePath	<p>The directory path to use for storing temporary (work) files. The conduit receives files from the handheld and creates files to send to the handheld. These files are stored in the TmpFilePath directory.</p> <p>See the notes for relative vs. absolute file paths for LogFilePath as it also applies to TmpFilePath.</p>
InsFilePath	<p>The directory path to use for storing auto-update files. The conduit can send application updates to the handheld. Those files are stored in the InsFilePath directory.</p> <p>See the notes for relative vs. absolute file paths for LogFilePath as it also applies to InsFilePath.</p>
InsFileName	<p>The name of the executable that is sent to the handheld for the auto-update mechanism. This value is normally "HBSetup.exe" and should not be changed.</p>
AutoClean	<p>This setting is used to specify whether or not the files in the TmpFilePath are automatically deleted after processing. If set to TRUE, all upload and download files are deleted after processing. If set to FALSE, all upload and download files are left in the TmpFilePath directory after processing. Normally, this is set to TRUE. But on occasion, it is useful to set this to FALSE for debugging purposes. If left at FALSE, somebody should regularly go into the TmpFilePath directory and delete files that are older than a month. Note that even if set to TRUE, some files may not be deleted if there were severe errors encountered while processing the files. This is normal.</p>
CheckUpdateConflict	<p>Used to specify what action should be taken if records are edited on multiple handhelds. For example, if two handhelds were to edit the same value (handheld A changes a reading from 1.0 to 2.0 and handheld B changes the same reading from 1.0 to 3.0), then a decision has to be made as to which edit should prevail. If set to "TRUE", then update conflicts are checked. In the example above, if handheld B synchronizes after handheld A, the reading change</p>

	<p>from 1.0 to 3.0 will not be saved to the HotButton database, but will instead be reported in the SYNC_ERROR table. If set to "FALSE", then update conflicts are not checked and updates simply overwrite the previous value. This latter functionality is sometimes referred to as the "last edit wins" business rule.</p> <p>Recommended value: FALSE</p>
LogLevel	<p>Sets the amount of information printed to the log files.</p> <p>Minimum value: 0 Maximum value: 9 Recommended values: 0, 1, 2, 3</p> <p>Higher values result in considerably more debug info being printed to the log file and considerably slow down the conduit. Values from 5 to 9 should only be used for debugging purposes when instructed to by an employee of HotButton Solutions.</p> <p>See the additional notes on log files included at the end of this document.</p>
UpdateRetryLimit	<p>This setting, along with "UpdateRetryDelay", specifies the number of retries and the delay (in seconds) between retry attempts when communicating with the database. A retry attempt is occasionally needed if the database server is busy with other processes and is unable to process a conduit transaction within a reasonable amount of time.</p> <p>Minimum value: 1 Maximum value: 100 Recommended value: 3</p>
UpdateRetryDelay	<p>This setting, along with "UpdateRetryLimit", specifies the number of retries and the delay (in seconds) between retry attempts when communicating with the database. A retry attempt is occasionally needed if the database server is busy with other processes and is unable to process a conduit transaction within a reasonable amount of time.</p> <p>Minimum value: 1 Maximum value: 300 Recommended value: 3</p>
ClientTimeout	<p>This setting is intended to work around an issue with some RAS servers that leave a socket connection lingering even after losing the modem connection. The conduit will explicitly close a connection if it doesn't receive any messages from the client after this timeout period has elapsed (in seconds). The granularity of this setting is 10 seconds and the value cannot be less than 10 seconds. A value of 60 is the default and recommended for dialup connections. Values less than 60 may result in aborted sessions if large packet sizes are sent over slow connections.</p> <p>Minimum value: 10 Maximum value: 300</p>



	Recommended value: 60
SocketOptionLinger	<p>This is used to set the number of seconds that a socket connection will remain open after closing it. Use a value of zero to disable lingering.</p> <p>Minimum value: 0 Maximum value: 300 Recommended value: 0</p>
SocketOptionNoDelay	<p>This is used to enable or disable Nagle's algorithm for send coalescing on a socket. Set it to "TRUE" to disable Nagle's algorithm. Set it to "FALSE" to enable Nagle's algorithm.</p> <p>Recommended value: FALSE</p>
SocketOptionReuseAddress	<p>Set this to "TRUE" to reuse addresses. Set it to "FALSE" to not reuse addresses.</p> <p>Recommended value: FALSE</p>
DownloadCommandTimeout	<p>This setting can be used to increase the number of seconds allowed for a database query before a timeout exception is generated. The default value of 30 seconds is, apparently, not long enough for some slower servers.</p> <p>Minimum value: 10 Maximum value: 1000 Recommended value: 30</p>
DownloadTimeOffset	<p>This setting is used to work around timing issues with other process (like the HBUUniversalTranslator) that may be running at the same time as the conduit. This setting indicates the number of minutes to offset a handheld's last known synchronization timestamp and should be set to a low numeric value (e.g. 1) to avoid repeatedly downloading the same records to a handheld. A value of 0 (zero) disables the offset entirely.</p> <p>Minimum value: 0 Maximum value: 65535 Recommended values: 0-5</p>



3.6 Log File Usage

3.6.1 Process Log Files

The conduit creates a new log file each day using the following naming convention:

- HBS_Conduit_YYYYMMDD.txt

The log file is not created if there is nothing to log on that day. This file contains logging and error messages for the conduit process that are outside the scope of the session log files (see the next section). Typically, the only messages seen are “conduit started” and “conduit stopped” unless an error occurred which resulted in a complete failure of the conduit.

The following table lists the messages that can occur for different values of the LogLevel parameter. Log levels higher than 1 produce the same output as log level 1.

LogLevel	Messages
0	Only error messages are printed to the log.
1	Start and Stop messages are printed to the log, in addition to any error messages.

3.6.2 Session Log Files

The conduit also creates a new directory each day to store session related logging and error messages. These directories use the following naming convention:

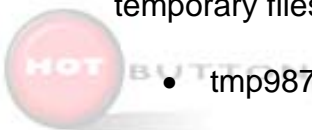
- YYYYMMDD

These directories are not created if there is nothing to log on that day. Each session can have a log file, or an error file, or both. At the beginning of each session, a temporary file name is assigned to the log and error files of the form:

- tmpN.log (for log files)
- tmpN.err (for error files)

Upon receiving a successful Session Request message and passing validation, the log and error files are renamed to that of the session ID. For example, the temporary files may initially be named:

- tmp987654321.log



- tmp987654321.err

but may subsequently be renamed:

- 00005000001234567.log
- 00005000001234567.err

Note that the first five characters of the file name are the issuing unit ID. This makes it easy to find the log and error files for a specific handheld sync session on any given day. Any files that are not renamed, i.e. they continue to have a “tmp” prefix, indicate sessions that were so badly corrupted that they could not be validated.

The .err file contains only error messages. The .log file contains logging messages and error messages. This makes it easy to determine if any errors occurred on any given day; if there are no .err files, then there were no errors.

The following table lists the messages that can occur for different values of the LogLevel parameter and how the .log and .err files are affected. Log levels higher than 3 should only be used for debugging purposes.

LogLevel	Messages
0	<p>Only error messages are printed to the .err file. If there are no errors, then no .err file is created.</p> <p>No logging information is recorded. The .log file is never created since it would simply be a copy of the .err file.</p>
1	<p>Only error messages are printed to the .err file. If there are no errors, then no .err file is created.</p> <p>This is the simplest log level and contains information relating to the conduit's internal processes. A typical session appears as follows:</p> <p>Connection accepted with 192.168.1.103:2586 at 5/1/2007 5:02:49 PM Session started with 192.168.1.103:2586 at 5/1/2007 5:02:49 PM Upload started at 5/1/2007 5:02:49 PM Upload finished at 5/1/2007 5:02:49 PM Upload processing started at 5/1/2007 5:02:49 PM Found 1 messages to process Upload processing finished at 5/1/2007 5:02:49 PM Download processing started at 5/1/2007 5:02:49 PM Found 2533 messages to download Download processing finished at 5/1/2007 5:02:54 PM Download started at 5/1/2007 5:02:54 PM Download finished at 5/1/2007 5:02:54 PM</p> <p>The .log file also contains any error messages from the .err file.</p>
2	<p>Only error messages are printed to the .err file. If there are no errors, then no .err file is created.</p>

	<p>This level adds information related to the messages sent between the conduit server and the client. A typical session appears as follows:</p> <p>Connection accepted with 192.168.1.103:2672 at 5/1/2007 5:03:51 PM Message Received: Session Request Session started with 192.168.1.103:2672 at 5/1/2007 5:03:52 PM Message Sent: Session Acknowledge Message Received: Session Request Session Request message ignored Message Received: Payload Packet Upload started at 5/1/2007 5:03:52 PM Upload finished at 5/1/2007 5:03:52 PM Upload processing started at 5/1/2007 5:03:52 PM Found 1 messages to process Message Sent: Acknowledge Message Received: Acknowledge Upload processing finished at 5/1/2007 5:03:52 PM Message Sent: Acknowledge Message Received: Ready For Download Download processing started at 5/1/2007 5:03:52 PM Found 2533 messages to download Download processing finished at 5/1/2007 5:03:55 PM Download started at 5/1/2007 5:03:55 PM Message Sent: Payload Packet Message Received: Acknowledge Download finished at 5/1/2007 5:03:55 PM Message Sent: Session Terminate Connection closed with 192.168.1.103:2672 at 5/1/2007 5:03:56 PM</p> <p>The .log file also contains any error messages from the .err file.</p>
3	<p>Only error messages are printed to the .err file. If there are no errors, then no .err file is created.</p> <p>This level adds information related to database access. Filenames included in any application updates are also included. A typical session appears as follows:</p> <p>Connection accepted with 192.168.1.103:1129 at 5/1/2007 5:32:46 PM Message Received: Session Request Session started with 192.168.1.103:1129 at 5/1/2007 5:32:46 PM Message Sent: Session Acknowledge Message Received: Session Request Session Request message ignored Message Received: Payload Packet Upload started at 5/1/2007 5:32:46 PM Upload finished at 5/1/2007 5:32:46 PM Upload processing started at 5/1/2007 5:32:46 PM Found 54 messages to process Table: DC_DATA_MASTER, records = 2 Table: DC_DATA_DETAIL, records = 52 Message Sent: Acknowledge Message Received: Acknowledge Upload processing finished at 5/1/2007 5:32:46 PM Message Sent: Acknowledge Message Received: Ready For Download</p>

<p>Download processing started at 5/1/2007 5:32:46 PM Query: ASSET, records = 0 Query: LOCATION, records = 0 Query: RUN, records = 0 Query: USER_INFO, records = 1 Found 1 messages to download Download processing finished at 5/1/2007 5:32:53 PM Download started at 5/1/2007 5:32:53 PM Message Sent: Payload Packet Message Received: Acknowledge Download finished at 5/1/2007 5:32:53 PM Message Sent: Session Terminate Connection closed with 192.168.1.103:1129 at 5/1/2007 5:32:53 PM</p> <p>The .log file also contains any error messages from the .err file.</p>
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3.7 HBS_OrgAdmin

The configuration file 'HBS_OrgAdmin.exe.config' is located under *C:\Program Files\HotButton Solutions\HBS_OrgAdmin*.

The parameters in the 'HBS_OrgAdmin.exe.config' file are as follows:

Parameter	Description	Example
HBConnectionString	The encrypted connection string for the HotButton database	1ec613c6be77...
HBModeString	Database platform:schema or owner name	SQLSERVER:HBSYS
HBOrgMoniker	Organization nickname	MAARS
HBAppName	Database application name	MAARS_ORGADMIN
ExternalReleaseVersion	External release version number	1.0.0
LogFilePath	The path for OrgAdmin log file	log
LogLevel	0 = no logging 9 = most detailed logging	5
UTPath	The location of the Universal Translator	C:\Program Files\HotButton Solutions\HBS_UniversalTranslatorService
UTConfig	The location of the Universal Translator configuration file	C:\Program Files\HotButton Solutions\HBS_UniversalTranslatorService\HBS_UniversalTranslatorService.exe.config
ConduitConfig	The location of the	C:\Program Files\HotButton

	Conduit configuration file	Solutions\HBS_ConduitService\HBS_ConduitService.exe.config
SourceDir	The default source directory for commissioning	C:\Program Files\HotButton Solutions\HBS_Horizon-HDS
DestinationDir	The default destination directory for commissioning	C:\Commission

3.8 HBS Notification Server/Service Configuration Settings

Key	Value
HBConnectionString	<p>Specifies the connection between the notifier and the HotButton database.</p> <p><i>For SQL Server, use this:</i> Data Source=AAA; initial catalog=BBB; user id=CCC; password=DDD</p> <p>where: AAA = name of SQL Server (i.e. the computer name) BBB = name of HotButton database (i.e. HBSxxx) CCC = name of user account that has access to HotButton database (i.e. hbcustomer) DDD = password for user account (i.e. bearpit)</p> <p><i>For Oracle, use this:</i> Data Source=AAA; user id=CCC; password=DDD</p> <p>where: AAA = the Oracle Net Service Name for the HotButton database CCC = name of user account that has access to HotButton database (i.e. hbcustomer) DDD = password for user account (i.e. bearpit)</p>
HBModeString	<p>Specifies both the type of database to connect to and the schema to use when accessing the HotButton database objects.</p> <p><i>For SQL Server, use this:</i> SQLSERVER:EEE</p> <p><i>For Oracle, use this:</i> ORACLE:EEE</p> <p>where: EEE = the schema for the HotButton database objects (i.e. HBSYS)</p>
ARConnectionString	<p>Specifies the connection between the notifier and the archive database.</p>

	<p><i>For SQL Server, use this:</i> Data Source=AAA; initial catalog=BBB; user id=CCC; password=DDD</p> <p>where: AAA = name of SQL Server (i.e. the computer name) BBB = name of archive database (i.e. HBSxxx) CCC = name of user account that has access to archive database (i.e. hbcustomer) DDD = password for user account (i.e. bearpit)</p> <p><i>For Oracle, use this:</i> Data Source=AAA; user id=CCC; password=DDD</p> <p>where: AAA = the Oracle Net Service Name for the archive database CCC = name of user account that has access to archive database (i.e. hbcustomer) DDD = password for user account (i.e. bearpit)</p>
ARModeString	<p>Specifies both the type of database to connect to and the schema to use when accessing the archive database objects.</p> <p><i>For SQL Server, use this:</i> SQLSERVER:EEE</p> <p><i>For Oracle, use this:</i> ORACLE:EEE</p> <p>where: EEE = the schema for the archive database objects (i.e. HBSYS)</p>
LogFilePath	<p>The directory path to use for storing log files. The directory path can be specified using a relative or absolute path. A relative path, such as "log" or "logfiles\notifier", is always relative to the location of the notification executable. For the notification service, the executable is located in the "Windows\System32" directory. Thus any relative file paths will be from that directory. Alternatively, an absolute file path can be used to specify any location for the log files as such: "C:\Program Files\HotButton Solutions\HBSNotificationService\log". Whether using relative or absolute paths, the notifier will create the directory path before any log files are generated.</p>
LogLevel	<p>Sets the amount of information printed to the log files.</p> <p>Minimum value: 0 Maximum value: 1 Recommended values: 0, 1</p> <p>Higher levels include all the information from lower levels.</p> <p>Level 0: only error messages are printed. Level 1: error messages and minimal logging info are printed.</p>
SendInterval	<p>Specifies the number of minutes between successive invocations of the notification process. Only one process can run at a time. If a</p>

	<p>process is scheduled to run at time T but a previous process at time T-1 is still running, the process at time T will simply exit.</p> <p>Minimum value: 1 Maximum value: 1440 (one day) Recommended value: 5</p>
STime	<p>Specifies the time of day (in local time, not UTC time, using a 24 hour clock, 00:00-23:59) that statistics should be generated. Statistics only need to be generated once a day and should be done when the database is still accessible but is not undergoing a lot of other processing (e.g. between midnight and 6 am).</p> <p>Minimum value: 00:00 Maximum value: 23:59 Recommended value: 00:15</p>
ATime	<p>Specifies the time of day (in local time, not UTC time, using a 24 hour clock, 00:00-23:59) when archiving should be performed. Archiving does not need to be performed more than once a day and should be done when the database is still accessible but is not undergoing a lot of other processing (e.g. between midnight and 6 am).</p> <p>Minimum value: 00:00 Maximum value: 23:59 Recommended value: 00:45</p>



3.9 HBS_UniversalTranslatorService

The configuration file 'HBS_UniversalTranslatorService.exe.config' is located under C:\Program Files\HotButton Solutions\HBS_UniversalTranslatorService.

The parameters in the 'HBS_UniversalTranslatorService.exe.config' file are as follows:

Parameter	Description	Example
HBConnectionString	The encrypted connection string for the HotButton database	1ec613c6be77...
HBModeString	Database platform:schema or owner name	ORACLE:HBSYS
HBOrgMoniker	Organization nickname	MAARS
HBAppName	Database application name	MAARS_UT
LogFilePath	The path for the HBS_UniversalTranslatorService log file	C:\Program Files\HotButton Solutions\HBS_UniversalTranslatorService\log
LogLevel	0 = no logging 9 = most detailed logging	9

3.10 Bulleye Reporting

Parameter	Description	Example
HBConnectionString	The encrypted connection string for the HotButton database	1ec613c6be77...
HBModeString	Database platform:schema or owner name	ORACLE:HBSYS
HBOrgMoniker	Organization nickname	MAARS
HBAppName	Database application name	MAARS_UT
ReportFormatFolder	File path to storage location of custom reports.	C:\Program Files\HotButton Solutions\Bullseye_reports



4 Citrix Environment

It is possible that it will be necessary to synchronize the handheld computers directly with the server running HotLeap, and that the server running HotLeap is also running Citrix.

System requirements for the ActiveSync synchronization in a Citrix environment are as follows:

- Citrix MetaFrame Presentation Server 4.0 or later.
- ActiveSync 3.7 or 3.8 only.

 **Note:**

- *ActiveSync 4.0 and 4.1 are not supported on the 32-bit version of Citrix Presentation Server 4.0. This is because ActiveSync 4.0 and 4.1 no longer allows synchronization via exposed TCP/IP connections such as WiFi, LAN or Dial-up.*
- *No version of ActiveSync is supported on Citrix MetaFrame Presentation Server 3.0 or earlier.*
- *ActiveSync does not need to be installed on every client.*
- *ActiveSync and HotLeap applications must be installed the same server (Terminal Server).*
- *COM ports need to be mapped on the server.*



5 Dialup Configuration on a Terminal Server

In order to receive dialup connections from handhelds, the Terminal Server can be configured as a dialup server. Attach an external modem to COM1 of Terminal Server and add the modem to Windows through Add/Remove Hardware (Start > Settings > Control Panel > Add/Remove Hardware), selecting:

- Add/Trouble Shoot a device
- Add a new device
- No, I want to select the hardware from a list
- Modems
- Don't detect my modem; I will select it from a list
- <choose the appropriate modem>
- COM1

Then add connection (Start > Settings > Control Panel > Network and Dial-up Connections > Make New Connection) with the following settings:

- Accept incoming connections
- <choose the appropriate modem>
- Do not allow virtual private connections
- Click New to create an account
- (User ID:<user ID>, Password: <password>)
- Check <user ID>
- Default networking components (all checked)
- Incoming connections

