



# Intel® One Boot Flash Update Utility

## User Guide

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# Introduction

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The Intel® One-Boot Flash Update (Intel OFU) Utility updates the System BIOS, Baseboard Management Controller (BMC) firmware, Hot-swap Controller (HSC) firmware, Field Replaceable Unit firmware, and Sensor Data Record (SDR) firmware on the Intel server while the operating system is running. The utility may be launched from a command prompt in Windows, Linux, or the Windows Preinstallation Environment 2005. This utility can also update the optional Intel Local Control Panel firmware on Quad- and Dual-Core Intel® Xeon® Processor-Based Servers from Intel.

The BMC boot block, Intel Local Control Panel, HSC, and FRU updates takes effect immediately when the utility executes. The System BIOS, BMC Op Code, SDR and BMC Platform Information Area (PIA) updates are programmed into their respective secondary flash areas and the utility sets an internal flag in the BIOS and BMC to indicate that the update occurred. After a system reset, the newer version of the System BIOS, BMC, and SDRs are validated and activated.

This utility can be executed remotely through a secure network connection using a Telnet Client and Terminal Services in Windows or using a Telnet Client and Remote Shell under Linux.

## Supported Operating Systems

This utility runs on the Windows, Red Hat Linux, and SuSE Linux Operating Systems supported by Intel System Management Software unless otherwise noted in the Release Notes or the Supported Operating System list for your specific Intel server platform. The Intel Server Board S5000PAL, S5000PSL, and S5000VSA also supports Intel OFU on the Microsoft Windows Preinstallation Environment 2005 operating system included with Microsoft Windows Server 2003 SP1 and Microsoft Windows XP SP2.

## Supported Intel® Server Platforms

Refer to the list of supported Intel Server Platforms at the end of this document, or information on your server at <http://support.intel.com/support/motherboards/server/>.

### NOTE

*The Intel S3000 family of server platforms only supports BIOS updates using Intel OFU.*

# Running Intel® One Boot Flash Update

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The Intel OFU utility is run by executing the flashupdt command from a command prompt.

## NOTES

*In order to run this utility, you must first set the working directory to the directory where the utility is installed. This is required because the utility depends on certain files that are expected to be located in the working directory.*

*Intel OFU requires Windows administrative or Linux root permissions.*

## Command Line Syntax

### Syntax:

```
flashupdt [-i] [-u <URL or path>] [-c] [-h|?]
```

### Description:

Updates the System BIOS or firmware on the local server with the System BIOS or firmware specified in the Intel OFU configuration file provided with the update package.

### Options:

[-i]	Displays the version information for the currently running System BIOS, BMC, and SDR. If the <code>-i</code> option is specified with the <code>-u</code> option, the utility displays the version information of the update package files.
[-u]	Performs the System BIOS and firmware update. The <code>&lt;URL or path&gt;</code> parameter specifies the location where the files required for the update are located. The value of <code>&lt;URL or path&gt;</code> can be a local file system path, an FTP server, or an HTTP server. Examples of using the <code>-u</code> option:  <code>-u</code> Specifies the current local directory. <code>-u http://&lt;IP address or URL&gt;/&lt;path&gt;</code> Specifies an HTTP server. <code>-u ftp://&lt;login:password&gt;@&lt;server name or IP address&gt;/&lt;path&gt;</code> Specifies an FTP server.  If <code>-u</code> is used in conjunction with <code>-i</code> , no update is performed. Only the package information is displayed.
[-c]	Cancels all pending update operations of the BIOS, BMC and SDR that were performed using the utility. The utility resets the internal flags in the BIOS, BMC and SDR to cancel the update operation, whether there is one or not. FRU updates take effect immediately.
[-h ?]	Displays command line help information.

### Syntax examples:

```
flashupdt -u ftp://ftp.examplesite.com/UpdatePackage/ServerName
```

```
flashupdt -u "ftp://ftp.examplesite.com/Update Package/Server Name"
```

```
flashupdt -u ftp://Kevin:87w09@ftp.examplesite.com/UpdatePackage/ServerName
```

For Windows:

```
flashupdt -u c:\UpdatePackage\ServerName
```

For Linux:

```
flashupdt -u /UpdatePackage/ServerName
```

## Updating the Server from a Remote Client

This utility can be executed remotely via a secure network connection using a Telnet Client and Terminal Services in Windows, or using a Telnet Client and Remote Shell under Linux. See your operating system documentation for further information on remotely logging-in and executing commands.

Once you have logged-in remotely, you can use the syntax described above. This process can be scripted to allow remote updates of multiple servers.

# Error Exit Codes

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The following error codes may be used when the Intel OFU utility is run from a script.

**Note:** the update configuration file (.cfg) may use the ERRORLEVEL command to override these values.

Value	Description
0	Successful termination
1	Invalid invocation or unknown command line argument
2	File was not found
3	Unable to read a file
4	The file update package is incompatible with the target server
5	A file in the update package is invalid or unsupported
6	Firmware interface failure (an error occurred when reading or writing to the BMC, setting the update notification, or updating the BMC, FRU, HSC, Intel Local Control Panel, or SDR)
7	BIOS interface failure (an error occurred when reading the BIOS ID, setting the update notification, or updating the System BIOS)
8	Insufficient rights (the user must have Administrator or root rights)
9	Utility is already running in another process
10	Utility initialization failed



# Supported Intel® Server Boards

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This utility supports the following Intel® Server Boards:

- Intel Entry Server Board SE7221BK1-E
- Intel Server Board SE7320SP2
- Intel Server Board SE7320VP2
- Intel Server Board SE7520AF2
- Intel Server Board SE7520BD2
- Intel Server Board SE7520JR2
- Intel Server Board SE7525GP2
- Intel Server Platforms SR6850HW4, SR6850HW4M, SR4850HW4 and SR4850HW4M
- Intel Server Board S5000PAL
- Intel Server Board S5000PSL
- Intel Server Board S5000VSA
- Intel Server Board S5000PHB
- Intel Server Board S5000XVN
- Intel Server Board S5000XSL
- Intel Server Board S5000SAL
- Intel Server Board S5400RA
- Intel Server Board S3000AH
- Intel Server Board S3000AHV
- Intel Server Board S3000PT
- Intel Server Board S7000FC4UR
- Intel Server Board S3200SH
- Intel Server Board X38ML
- Intel Server Board S5400SF

To find the latest Intel OFU update package for your server, refer to <http://support.intel.com/motherboards/server/>.

For installation instructions, refer to the separate installation instructions provided with the software, or, if you have a web-based distribution of the software, refer to the Readme file provided with the download.

**NOTE**

*The Intel S3000 family of server platforms only supports BIOS updates using Intel OFU.*

# Glossary

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The following abbreviations are used in this document:

<b>Term</b>	<b>Description</b>
BMC	Baseboard Management Controller
Firmware	In this document, firmware refers to the BMC, FRU, and SDR components
FRU	Field Replaceable Unit
IPMI	Intelligent Platform Management Interface
PIA	Platform Information Area
SDR	Sensor Data Records