

Bug Taxonomy for Install Testing

Note: This is a list compiled over many years. As a result, you may find some duplications in it. The order of groups of items does not hint about importance or priority. Use your own judgement for your own specific case.

I am pretty sure this is not a complete list of everything that can/should be tested, but it's a start...

Provided as-is with no guarantees.

Michael Stahl (michael.m.stahl@gmail.com / michael.stahl@intel.com)

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Install types

- First time (clean system)
- Repair
- Upgrade
- Downgrade
- Reinstall
- Over good installation
- Over aborted installation
- Over corrupted installation
- Silent install
- Custom Install
- For all users
- For only the user logged in
- Different system "state" (e.g. install in EFI; does it work when the OS is up?)

Different configurations

- Installation works and correct components are installed
- ... there is a lot to add regarding "configurations".

Compatibility

- Does not interfere with other installed system components (e.g other HW cards)
- Compatible with other HW/SW that is targeted to work with your product
- Old versions of the OS (how far does it still work?)
- Verification that programs/services/resources that the program relies on, exist (ActiveX, DirectX, QuickTime, Java runtime, Visual Studio run time, HW availability...).

Efficiency

- Disk space usage
- Speed

Usability

- Ease of use
- Informative (time left to install; status bars; amount of disk space used)
- Does not require too much input
- Defaults exist and are correctly chosen (to fit most users)
- Warns the user when needed
- Clear error messages

Documentation

- Soft-copy Help
- Hard-copy Manual
- Links to support site are working
- Readme file
- EULA
- Exists
- Is up-to-date
- Can be printed
- Can be saved

Files aspects

- All files copied
- No extra files (including removals of temp files!)
- Correct file versions
- Files copied to correct locations
- File attributes (e.g read-only, hidden)
- User prompted when replacing existing files (not always applicable)
- Correctly deals with various Temp location scenarios
 - Different name
 - Does not exist
 - Long name
 - Not on default location
 - No permissions

Install from Different locations

- From CD
- From disk
- From DoK
- From network
- From arbitrary folder
- From the folder that is the target default location for the installation
- From different partition

Install to Different locations than the default

- Another folder
- Another partition
- Another disk
- Portable media (e.g. USB DoK)

3rd party components install

- Verify if needed
- Install correctly

Option override

- Exist where applicable
- Works
- Partial install
 - Installed features work
 - Not-installed features don't show, or can't be enabled' or, when enabled, result in informative message
 - Correct behavior of Reinstall, Repair, Upgrade, Downgrade (keeps the partial install or prompts to allow selection)

Registry settings

- For different Install type
- For different Install Options
- Registry keys updated as needed
- Registry keys removed on Uninstall
- Correct behavior if registry keys were tampered with
- Sensitive registry keys do not have tell-tale names that "invite" tampering with
- Names of registry keys that are there to allow expert modifications are sensible
- Removal of any pre-production reg keys that were added to help in testing or debug

Internationalization:

- Menu in correct language
- Error messages in correct language
- Additional files where applicable
- Correct translation

Error cases

- No disk space
- System does not meet minimal configuration requirements
- Unexpected power-off
- Screen-saver activation
- Install to non-existing drive
- Install to illegal directory (name)
- Dealing with shared resources that are in use
- Incompatible system / applications
- Install/Uninstall when on battery power (fully charged; close to depletion)
- No internet connection (if the installer needs it)
- Aborted install (many possible cases. E.g. user kills the process; timeout; power fail) - can uninstall be done to clean the system? Can re-install be done?

Security issues

- Permission to install
- Install as user, power user, admin
- Permission to uninstall
- Install without appropriate permission
- Uninstall without appropriate permission

System effects

- Shared components counter incremented on install

Core functionality after install

The level of testing can vary widely; usually this is some "sanity checks" to see a working program.

Uninstall

- Verify all changes have been removed
- Verify no changes to the rest of the system (corruption)
- User's files in program directory not deleted
- System effects
- Shared components counter decremented
- Zeroed-out components are removed
- Partial uninstall
- Sequence of Install/Uninstalls
- Dealing with shared resources that are in use
- Uninstall while the files that need to be deleted are in use
- Aborted uninstall (many possible cases. E.g. user kills the process; timeout; power fail) - can uninstall be re-done?

Installer generates program group, shortcuts

- In the default places
- As modified by options
- In right-click menu (where applicable)

Driver installation

- With appropriate .cat file
- Without .cat file
- With bad .cat file
- With appropriate .inf file
- Without .inf file
- With bad .inf file
- Prompt to user before 'restart' (if needed)
- Manual update
- Auto Update (find on PC the latest version)

Miscellaneous

- Online product registration
- User registration (where applicable)