HCA version 15 major changes from version 14

To keep these release notes to a manageable size, included here is an outline of the changes. Some changes require a more detailed set of notes. These are:

- Cloud Control
- Daily Report
- Design Access
- Extra Text Icon Theme
- Log changes
- Object tags
- Online Library
- Program changes
- Statistics
- Weather

You will see references to these in the list below.

1. Online library for programs, classes, examples, and icons with the ability to download and import into a design. For more information see the “Online Library” release notes.

2. Major changes for parameterized programs. Now 8 parameters, default parameter values, and parameter help text. For more information see the “Program changes” release notes.

3. Major rework of support for weather data. A new weather provider with more advanced features is now available. For more information see the “Weather” release notes

4. Support for LIFX lighting via new class. For more information see the LIFX tech note.

5. New Daily report can be emailed to one or more selected destinations with information about the HCA status and operation. For more information see the “Daily Report” release notes.

6. The “Class manager” is removed and the class settings are now associated with the class program. Classes are now retrieved from the online library. Working this way, as new classes are developed access to them happens without a new install.

7. Improved use of class programs to serialize actions and prevent simultaneous execution of the class program. In previous versions of HCA, simultaneous execution of the class program for action on multiple devices could occur. This could lead to problems with some device implementations. Now there are no simultaneous executions of the class program. Each device operation must complete before the next starts.

8. The Get-Status VP element didn't list all devices that report status in the device list. Especially, user class objects. Now shows all devices that support status.

9. Better management for all the “supplemental” logs for HTTP, mail, DDNS, etc. Lots of various logs in HCA that help debug programs and HCA background actions. Changes in V15 prevent the logs from growing too large. In previous versions these supplemental logs were created with a simple filename, “weather.log” for example, and that file would grow ever larger over time. Now a new file is created each day tagged with month and day (“weatherLog_0913.log” for example) and log files older than 7 days are deleted.

10. When opening a program’s properties dialog, there is now a “Referenced” tab that shows what design elements the program references. This is the counterpoint to the “Referenced by” tab which shows who references the program.

11. Programs now have a documentation tab replacing the old “Notes” section. For more information see the “Program changes” release notes.

12. New icon theme that shows user settable text to the right of the icon. What that text shows can be specified in the theme information and can be controlled by programs. Note that this theme is supported only in HCA when running as a client or standalone and in the read-only Windows client, but not the mobile apps. For more information see the “Extra text icon theme” release notes.

13. Improved Auto-Off element. The Auto-Off programmer element now has more capabilities to change the action of an auto-off timer for a device. In previous versions it had limited capabilities.

14. Reworked configuration for HCA controlling devices via the cloud – “Outbound control” – and responding when to events from cloud devices – “Inbound Notifications”. For more information see the “Cloud control” release notes.

15. Thermostat element now has timeout handler option. In previous versions while the Thermostat-Test element had a timeout option, the Thermostat element didn’t.

16. Reworked log configuration to change to a “by protocol” method. For more information see the “Log changes” release notes.

17. Improved logging for class objects – log now shows class name and device ID. In previous versions when a user class device was shown in the log, the class name and the id of the device wasn’t shown. Now that information appears in the log.

18. New variable creation option for programs to always create local variables while the program is being changed and a new variable is created. For more information see the “Program changes” release notes.

19. Program variables dialog now lets you change the locality of a variable from global to local, or local to global. For more information see the “Program changes” release notes.

20. Program variables dialog when opened from the Visual Programmer can now be left open on the screen while working in the programmer. Makes it easier to remember what variables are defined. For more information see the “Program changes” release notes.

21. Added an optional "Except when" clause to schedule entries for sun-based times. When working with sun-based times in a schedule entry it was possible to create schedule entries that, due to the time of sunrise and sunset, wouldn’t work as intended. For example, a schedule entry that specified “lights on a sunset + 30 minutes and off at 8pm”. If sunset was 7:45, then the Off would happen at 8pm but the lights would come on at 8:15. Now the schedule entry can say “lights on at sunset + 30 except when past 8pm”.

22. Added the ability to use the state-change trigger specifying a program. Previously only a device was allowed.

23. Implemented various device and operation statistics. Programs can access using the _Statistics function. For more information see the “Statistics” release notes.

24. New expression functions allow programs to generate a list of objects (devices, programs, groups, rooms, folders, variables) contained in a design that match a criterion. For more information see the “Design access” release notes.

25. New “Tag” system for devices, programs, groups, folders, and rooms. A Tag is a name and optional value that is set manipulated by programs and can be adjusted manually in the development UI. Used for whatever reason desired. For more information see the “Object tags” release notes.

26. New expression functions. For more information see the “Program changes” release notes. Also, chapter 13 of the User Guide has been extensively re-written to document all functions that can be used in the Compute and Compute-Test elements. This can make an excellent “desk reference”.
    - _Assign
    - _VarValue
    - _SetSunriseDelta
    - _SetSunsetDelta
    - _AutoOffTime
    - _FileLoad
    - _Statistics
    - _DimUpPercent
    - _DimDownPercent
    - _DesignOpen
    - _DesignClose

- _DesignName
- _IsSuspended
- _IsInErrorState
- _IsDisabled
- _GetDeviceKind
- _GetDeviceMake
- _GetDeviceModel
- _IsValidObject
- _HCAFolder
- _ThisProgram
- _ObjectTagGet
- _ObjectTagSet
- _ObjectTagExists
- _ObjectTagDelete
- _ReportAdd
- _SetRunAgainTime
- _DeviceForAddress
- _AddressForDevice

27. Class programs now store and restore state across HCA start/stop if that configuration option is used. In previous versions, class devices had options on a “Restart” tab of their properties, but those options didn’t have any effect.

28. Improved expression editor with these changes.
    a. More function categories - fewer in the "Misc" catch-all category
    b. Function dropdown now sorted by function name
    c. Many function descriptions improved / corrected
    d. Larger font for the description text

    For more information see the “Program changes” release notes.

29. Web component removed. The Web Component has been removed and replaced by an online feature of the HCA Cloud.

30. CM15 support moved to Legacy status. In the current version of Windows, it is no longer possible to keep the HCA CM15 device driver installed and, while used by some users, to bring it up to Windows standard wasn’t possible for technical and business reasons. We suggest using the SmartHome 2413 model PowerLinc (USB or serial versions) as it can send and receive both X10 for existing devices and Insteon if more modern devices added to an installation.

    If you are currently using the CM15 successfully, support is still available. Open *HCA Options* and on the *Legacy* tab you can re-enable support. We do not recommend anyone to start using the CM15 if they are using HCA on Windows 10.

31. Improved logging for thermostat operations. In previous versions much information about actions on thermostats was not being fully logged.

32. Fixed a problem where the thermostat set point ranges weren't correctly handled if the heat and cool setpoint ranges were different. Also added checking to the thermostat element and schedule thermostat entry to check that the setpoint value entered is in the expected range.

33. Fixed problem with HCA keypads starting programs when in C/S mode. In previous versions, there cases where the programs were not started correctly.

34. The log options of a program started from another program using start-program element now are used while that program is running. When a program uses the “Start-Program” element on another program, the log options of the started program are in effect while that program executes and when it completes, the calling program log options are back in effect.

35. User class objects can now be added to groups. In previous versions this wasn’t possible.

36. The Get-Status element when naming an Insteon keypad now gets both the load status and button status.

37. A serious stability issue was addressed. If a program created new variables during execution when HCA (or HCAServer) had been operational for a while, HCA (or the HCAServer) could become unstable and either hang or terminate. Now, after much effort, resolved.

38. When configuring the Quick Access Toolbar, more HCA operations now have small icons available for use.

39. The button in the Tools ribbon category for Log Filters is removed. The "Filters" button in the log viewer now shows the filters applied to the log being seen in the viewer. Previously it always showed it applied to "Log 1" which was dumb.

40. In previous versions, if a change in schedule was made when using the calendar, that action could cause the schedule task to terminate and so not execute the new schedule. Now resolved.

41. Processing of wireless triggers – older style wireless door and window sensors – has been improved.

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