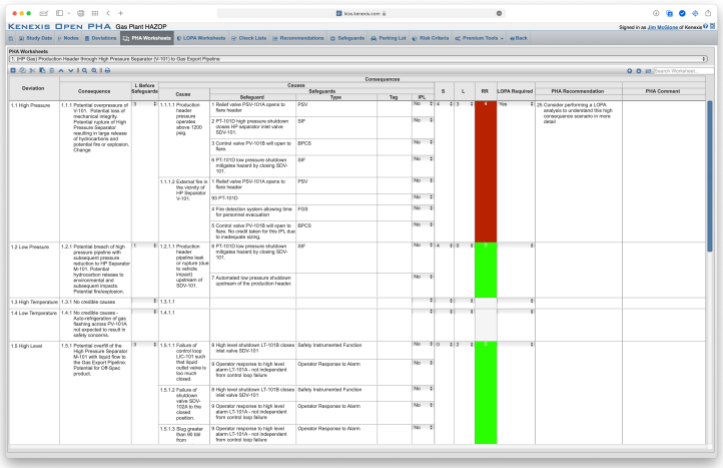
Open PHA

HAZOP, LOPA, SPR Software

Since Kenexis launched Open PHA software, thousands of users have downloaded and use the software worldwide. The software solves some complicated problems that other PHA software vendors have ignored.

Deliberately Different

First, the software was created from the beginning to be a cloud-based software product. Then the need for a desktop local version was developed from the same code to facilitate HAZOP and LOPA workshops in remote locations with limited internet access. The two versions use the same core code and work together for our customers. Then we did something other software vendors would never consider, we gave away Open PHA Desktop at no charge.



Second, other PHA software vendors created software that recorded the studies but saved the information in a format that was restrictive and difficult to integrate into other analysis tools. Open PHA was built with a super-set data structure so that the information recorded can be accessed by virtually any other software tool including corporate business intelligence software to dashboard critical safety study data for all your sites. The data is so available that word processing software can create a custom report using defined wildcards like <%Lopa_Recommendations%> to list all the studies LOPA Recommendations.

Third, we hate software revisions and fees to upgrade so we built Open PHA Cloud and Open PHA Desktop to automatically keep up to date at no charge. Ok, to be fair, the cloud-based software is an annual subscription license so you could argue that the update is included as part of the license.

Finally, we built Open PHA knowing we might not always be the best solution. So, the software does not lock up your study data in an unusable format. In fact, your study data can easily be exported from Open PHA.

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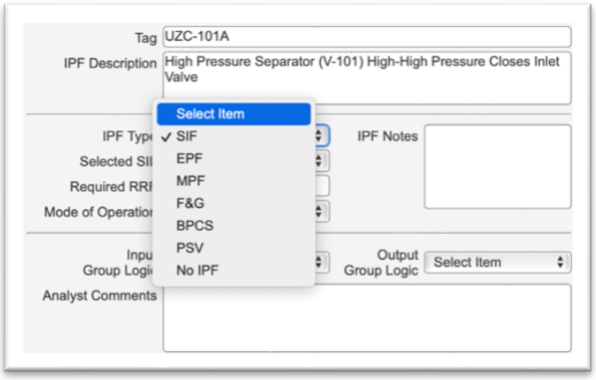
Features

Open PHA Cloud and Open PHA Desktop are designed for documenting, analyzing, and maintaining HAZOP, LOPA, and Security PHA Review (SPR) studies.

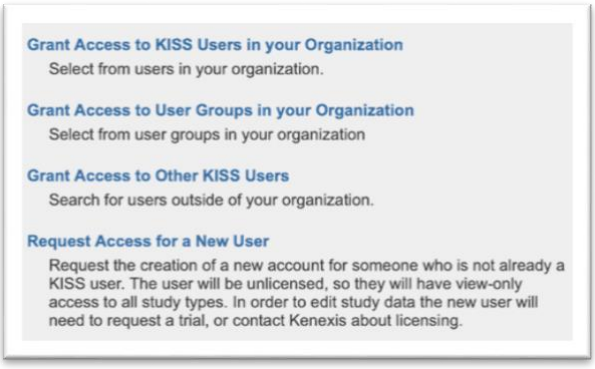
Open PHA Desktop is a complete PHA software package and is free to download and use on a Windows, Mac, and Linux computer.



Open PHA Cloud is enhanced using internet-based computing. Added features enhance the software and provide access to the other software tools from Kenexis like synchronizing IPFs (an IPF can be a SIF, EPF, MPF, F&G, BPCS, PSV) from Open PHA Cloud with our other software to perform SIL Verification or Fault-tree Analysis.

Both products support customized Templates, Reporting, Risk Matrix, Likelihood Categories, Consequence Categories, Risk Rankings, Nodes, Deviations, HAZOP & LOPA Worksheets, Recommendations, Safeguards, a Parking Lot, and Checklist.

Open PHA Desktop stores files locally on your computer without the need for an internet connection to facilitate work in remote areas. In many cases, this is enough for the small shop or contractor working on a budget. If at some point in the future you want to upgrade to the cloud version, the process is easy and now you can take advantage of the cloud-based storage provided from Open PHA Cloud.



Cloud-based Kenexis software products provide advanced features including secure storage and sharing, and integration with other software Kenexis software. The storage and sharing provide much more than just a file storage system. Our secure cloud-based platform is used to share secure and controllable access for editing or viewing files at a site, with corporate, and even with third parties. Now instead of emailing files and losing version control, everyone throughout the lifecycle can interact with one set of files securely and completely

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under your control. This is significant when files need to be shared especially outside of your organization with a contract engineering firm.

Open PHA data structure design is fully integrated using an open-source JSON standardized data structure that is revolutionizing PHA documentation. This structure allows the development of tools that can display a single set of data as a HAZOP worksheet, LOPA worksheet, or Bow-tie diagram. Gone are the days of porting and manipulating data and worrying about the consistency of information across multiple files, studies, or data structures. This allows the data from multiple scenarios to be rolled up into easier to use hazard registers and visualized with graphical approaches like bow-tie diagrams, eliminating the frustration of managing replicated data in multiple locations and different languages.

Open PHA supports both explicit and the less common implicit LOPA. In an Explicit LOPA, the team establishes a TMEL target based on a consequence severity, then explicitly defined frequencies of cause, and applies frequency modifiers such as conditional modifiers, enabling events and probabilities of failure for IPL's. In an implicit LOPA, the team works with the concept of "LOPA credits".

Features	Open PHA Desktop	Open PHA Cloud
Configurable HAZOP and LOPA Worksheets	✓	✓
Configurable, Import & Export Risk Criteria	✓	✓
Recommendation Tracking	✓	✓
Deep Copy & Paste, Search & Replace	✓	✓
Implicit & Explicit LOPA Support	✓	✓
Cross-Platform Support (Windows/Mac/Linux)	✓	✓
Templating for Nodes and Checklist		✓
Dashboards		✓
Revision Manager		✓
Synchronize IPFs with Vertigo for SIL Verification		✓
One Click Report Generating from Custom *.DOCX Template		✓
Study Content Translation to Other Languages		✓
Bowtie Graphic Generation		✓
Share and Collaborate with Extended Project Teams		✓

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Migrating PHA Studies to Open PHA

We realize you have PHA studies on other software including spreadsheets and transitioning to secure cloud-based solutions may seem difficult and time consuming. Let us make that easy for you. We will create the merge tool and port your PHA studies into Open PHA and then you can take advantage of our unified hazard assessment data structure to perform SIL Verification, Fault-tree Analysis, Quantitative Bowtie Analysis, and SIS Life Cycle Management.

Because HAZOP and LOPA studies are the core of process safety documentation, we believe it is important for the information contained within the HAZOP and LOPA to be easily shared across common applications and platforms. Open PHA was developed to make it easy to pull data from HAZOP and LOPA studies into custom software tools for broad analysis and custom reporting. This philosophy is a paradigm shift in PHA software as file data structures have historically been proprietary to prevent third-party access and discourage the use of competing software tools.

We will help you transition from your existing PHA software to Open PHA software and provide training to make the transition easy.

Security PHA Review Built-In

Security PHA Review (SPR) is an easy method to check safety functions for cybersecurity risks. In Open PHA you can easily turn on the fields to SPR to facilitate a review of a HAZOP and record if the cause and safeguards can be compromised by a hacker or malware, ultimately determining if additional effort is required to secure the scenario against a cybersecurity risk.

Kenexis

Kenexis is a process safety consulting engineering firm that provides technical safety engineering services for new and existing facilities including performance-based fire and gas mapping, and risk analysis for industries that manage risks related to chemicals or stored energy. Focused on process safety, we provide consulting engineering services, software, and training.