

Issue Tracking

ISSUE TRACKING SYSTEM

An issue tracking system (also called trouble ticket system or incident ticket system) is a computer software package that manages and maintains lists of issues, as needed by an organization. Issue tracking systems are commonly used in an organization's customer support call center to create, update, and resolve reported customer issues, or even issues reported by that organization's other employees. An issue tracking system often also contains a knowledge base containing information on each customer, resolutions to common problems, and other such data. An issue tracking system is similar to a "bugtracker", and often, a software company will sell both.

A ticket is a file contained within an issue tracking system which contains information about support interventions made by technical support staff or third parties on behalf of an end user who has reported an incident that is preventing them from working with their computer as they would expect to be able to. Tickets are commonly created in a help desk or call center environment. Typically the ticket will have a unique reference number, also known as a case, issue or call log number which is used to allow the user or support staff to quickly locate, add to or communicate the status of the user's issue or request.

These tickets are so called because of their origin as small cards within a typical wall-mounted work planning system when this kind of support started, operators or staff receiving a call or query from a user would fill out a small card with the user's details and a brief summary of their request and place it into a position (usually the last) in a column of pending slots for an appropriate engineer, so determining the staff member who would deal with the query and the priority of the request.

Architecture

The most common issue tracking system's design is relatively simple. A database is the main storage repository for all data. These data are managed by the business logic layer of the application. This layer gives the underlying raw data more structure and meaning, preparing it for human consumption. The now human-readable data are then presented to the support technician by another software application or web page. The end-user of the issue tracking system can create entirely new issues, read existing issues, add details to existing issues, or resolve an issue. Anytime a user of the system makes a change, the issue tracking system will record the action and who made it, so as to maintain a history of the actions taken. Each user of the system may have issues assigned to them, that is, that user is responsible for the proper resolution of that issue. This is generally presented to the user in a list format. The user may have the option of re-assigning an issue to another user, if needed. For security, issue tracking systems will authenticate its users before allowing access to the systems.

Issues

Issues can have several aspects to them. Each issue in the system may have an urgency value assigned to it, based on the overall importance of that issue. Critical issues are the most severe that should be resolved in the most expedient way possible, taking precedence over all other issues. Low or zero urgency issues are minor, and should be resolved as time permits. Other details of issues include the customer experiencing the issue (whether external or internal), date of submission, detailed descriptions of the problem being experienced, attempted solutions or work-arounds, and other relevant information. As previously noted, each issue maintains a history of each change.

Workflow

An example scenario is presented to demonstrate how a common issue tracking system would work:

- a) A customer service technician receives a telephone call, email, or other communication from a customer about a problem. Some applications provide automatic error reporting from exception handling blocks.

Issue Tracking

- b) The technician verifies that the problem is real, and not just perceived. The technician will also ensure that enough information about the problem is obtained from the customer. This information generally includes the environment of the customer, when and how the issue occurs, and all other relevant circumstances.
- c) The technician creates the issue in the system, entering all relevant data, as provided by the customer.
- d) As work is done on that issue, the system is updated with new data by the technician. Any attempt at fixing the problem should be noted in the issue system.
- e) After the issue has been fully addressed, it is marked as resolved in the issue tracking system.

The problem may not have been fully corrected, yet it will still be marked as resolved. The problem may be by-design, a known issue, or have a suitable work-around.

INTERNET FORUM

An Internet forum is a web application for holding discussions and posting user-generated content. Internet forums are also commonly referred to as Web forums, message boards, discussion boards, (electronic) discussion groups, discussion forums, bulletin boards, fora (the Latin plural) or simply forums. The terms "forum" and "board" may refer to the entire community or to a specific sub-forum dealing with a distinct topic. Messages within these sub-forums are then displayed either in chronological order or as threaded discussions.

Such forums perform a function similar to that of Usenet newsgroups and the dial-up bulletin board systems that were common from the late 1970s to the 1990s. Early web-based forums date back as far as 1996. A sense of virtual community often develops around forums that have regular users. Technology, computer games and/or video games, sports, fashion, religion, and politics are popular areas for forum themes, but there are forums for a huge number of topics. Internet slang and image macros popular across the internet are abundant and widely used in internet forums.

Membership and anonymity

Anonymous forums may offer full anonymity or pseudonymity, allowing posts without registration. Captchas, e-mail authentication, and tripcodes are often used to prevent comment spam on such forums.

Registered members of a forum, who are identified by unique usernames, may have additional privileges, such as the ability to edit their previous posts, start new topics, and control their individual settings and profiles. The profiles tend to include graphical avatars and signature blocks which are appended to their future posts, sometimes consisting of elaborate shoutboxes. Members also have the ability to send personal messages to each other. In certain cases, members have been given the ability to close their own topics, edit previously posted comments, or delete posts in topics they have started.

Western-style forums place heavy emphasis on identity and user registration. This makes the tone of discussion very different from the more anonymous 2channel style boards. The burdens of status and persona encourage both highly formal discourse and close personal relationships, depending on the tone given a forum by its moderators and heaviest users. The permanence of messages on many western-style forums can encourage users to self-moderate. Precursor systems like Usenet have been archived as far back as 1981 by Google Groups (formerly DejaNews).

Administrators and moderators

A forum administrator typically has the ability to edit, delete, move or otherwise modify any thread on the forum. Administrators also usually have the ability to close the board, change major software items, change global skins, modify the board, and ban, delete, or create members. Moderators have a subset of these powers, which may include editing, deleting, and moving threads, mass pruning, warning members for offences, and changing minor forum details. It is often possible for moderator privileges to be delegated to other forum members.

Issue Tracking

A board's moderation system can include moderation of the moderators via a meta-moderation system. The board software may also allow administrators to create wordfilters, automated scripts which strip undesirable text from users' messages. Other features may include sticky threads, allowing moderators and administrators to cause significant threads to display at the top of the forum's index.

Features

Forum software packages are widely available on the Internet and are written in a variety of programming languages, such as PHP, Perl, Java and ASP. The configuration and records of posts can be stored in text files or in a database. Each package offers different features, from the most basic, providing text-only postings, to more advanced packages, offering multimedia support and formatting code (usually known as BBCode). Many packages can be integrated easily into an existing website to allow visitors to post comments on articles.

Several other web applications, such as weblog software, also incorporate forum features. Wordpress comments at the bottom of a blog post allow for a single-threaded discussion of any given blog post. Slashcode, on the other hand, is far more complicated, allowing fully threaded discussions and incorporating a robust moderation and meta-moderation system as well as many of the profile features available to forum users. Full content management systems such as Drupal or Mambo can also incorporate full-blown forums as plugins or basic features of forums in other portions of their website.

Comparison with other web applications

One significant difference between forums and electronic mailing lists is that mailing lists automatically deliver new messages to the subscriber, while forums require the member to visit the website and check for new posts. Because members may miss replies in threads they are interested in, many modern forums offer an "e-mail notification" feature, whereby members can choose to be notified of new posts in a thread, and web feeds that allow members to see a summary of the new posts using aggregator software. The main difference between newsgroups and forums is that additional software, a newsreader, is required to participate in newsgroups. Visiting and participating in forums normally requires no additional software beyond the web browser.

Wikis, unlike conventional forums, typically allow all users to edit all content, including each other's messages. This level of content manipulation is reserved for moderators or administrators on most forums. Wikis also allow the creation of other content outside of the talk pages. On the other hand, weblogs and generic content management systems tend to be locked down to the point where only a few select users can post blog entries, although many allow other users to comment upon them.

Forums differ from chat rooms and instant messaging in that forum participants do not have to be online simultaneously to receive or send messages. Messages posted to a forum or Usenet are publicly available for some time, which is uncommon in chat rooms that maintain frequent activity.

Forum netiquette

Forum netiquette can vary on different forums. On default, individuals must agree to a Registry Agreement that defines a forum's rules before joining that particular forum, but whether those rules are actively enforced varies from forum to forum. For example, a family friendly forum would prohibit sexually explicit content, but a sex-oriented forum would encourage it. Also, some forums are more tolerant of cursing and rude behavior than others.

Multiple posts (or Double posting)

One common faux pas on internet forums is to post the same message twice. Users sometimes post versions of a message that are only slightly different, especially in forums where they aren't allowed to edit their earlier posts. Multiple posting instead of editing prior posts can artificially inflate a user's post count. Multiple posting can be unintentional; a

Issue Tracking

user's browser might display an error message even though the post has been transmitted or a user of a slow forum might become impatient and repeatedly hit the submit button. Multiple posting can also be used as a method of trolling or spreading forum spam. A user may also send the same post to several forums, which is termed crossposting. This problem was inherited from Usenet and is a common complaint in many forums.

In many forums which have editing allowed they have rules asking people not to make multiple posts, and also use a common plug-in to merge double posts (without an administrator/moderator having to manually delete or merge the posts).

Spamming

Forum spamming is a breach of netiquette where users repeat the same word or phrase over and over, but differs from multiple posting in that spamming is usually a wilful act which sometimes has malicious intent. This is a common trolling technique. It can also be traditional spam, unpaid advertisements that are in breach of the forum's rules. Spammers utilize a number of illicit techniques to post their spam, including the use of botnets. A different form of spamming is making posts that have little or no meaning (e.g., "I lik to tadada").

Trolls

A troll is a user that repeatedly and intentionally breaches netiquette, often posting derogatory or otherwise inflammatory messages about sensitive topics in an established online community to bait users into responding. They may also link to shock sites or plant images on networks that others may find disturbing in order to cause confrontation. Trolls known as gravediggers purposefully post in old and irrelevant threads simply to bring that thread to light again.