



Finalizing SUL, and why we're never doing it again

[[mw:User:Legoktm]]
Wikimania 2015

Background

- Each wiki had a local user table, users had to create accounts on each one individually
- User:Eloquence describes 3 strategies of SUL on foundation-I, #2 has “deferred conflict resolution” November 2004
- Single user login (SUL) introduced in 2007
- Evil plans to do a forced finalization, but never implemented
- Planned for summer 2013, then delayed.
- Top WMF Engineering priority for 2014 Q1

Terminology

- SUL – system that lets users use one username and password across multiple wikis
- global account - An account comprised of local accounts.
- local account - An account on an individual wiki.
- attached account - A local account that is linked to a global account
- unattached account - A local account that is not linked to a global account
- CentralAuth – MediaWiki extension that implements SUL

Goals

- Every user has a global account.
- Minimize the number of accounts that are forcibly renamed.
- Improve the renaming workflow for stewards.
- Reduce technical debt instead of adding to it.

Steps

- Manual migration
- Automated migration
- Global rename
- ~~Spamming~~ Email reminders
- Global rename request & queue
- Login with old name
- The great renaming
- Global user merge

Manual migration

- migrateAccount.php maintenance script
- Usually caused IRC RC bots to flood off
- Only merged based on same email address
- Could manually override winner of global account in certain circumstances

TimedMediaHandler

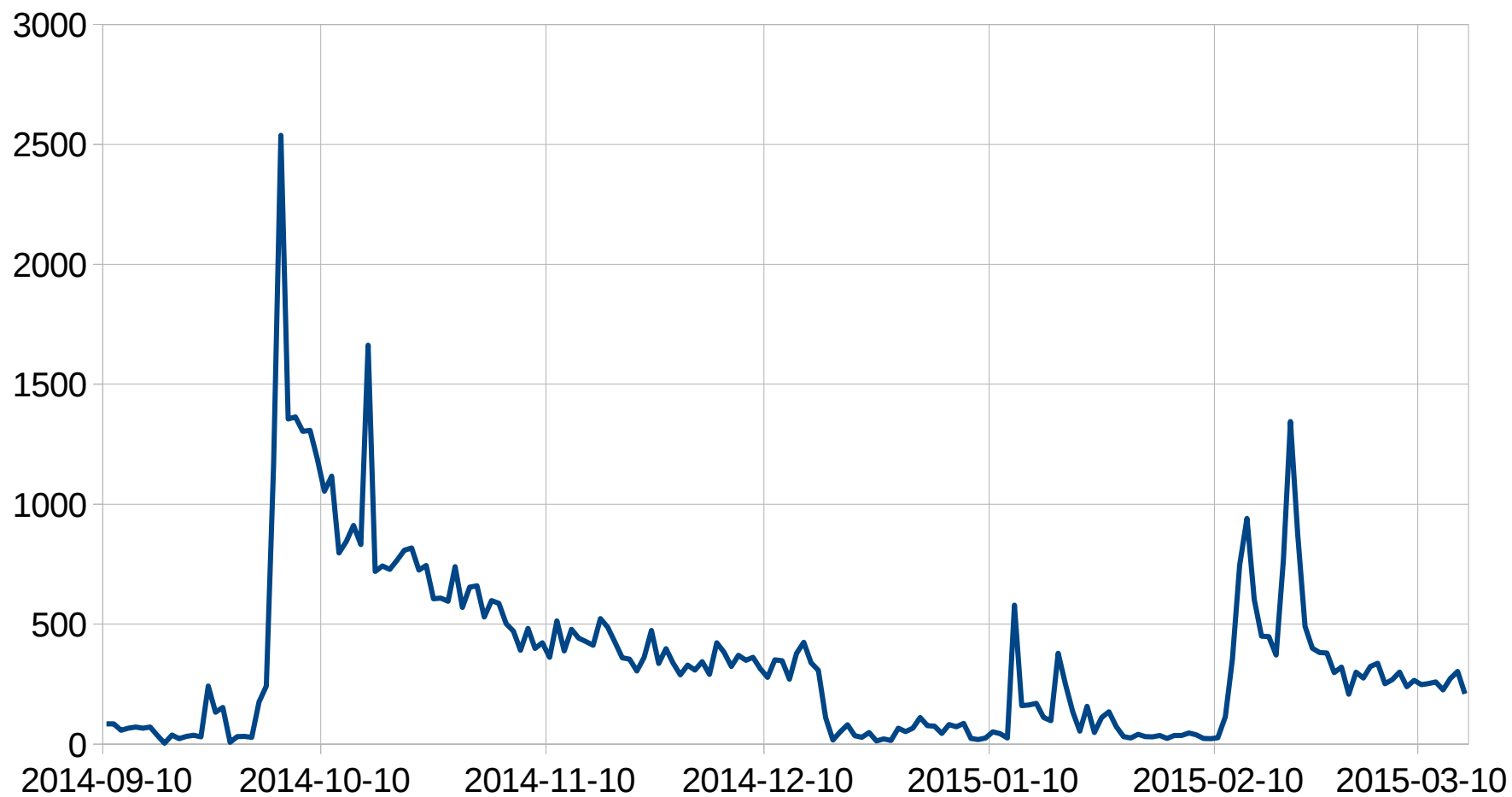
`https://commons.wikimedia.org/wiki/:South+Africa+National+Anthem.ogg.af.srt?action=raw&ctype=text/x-srt`

- Triggers autcreation of account
- Namespace missing (ns 710 doesn't exist on mediawiki.org)
- Using + for spaces instead of _
- text/x-srt is not whitelisted
- Triggers IE6 security filter, throwing `HttpError`

Automated migration

- We can merge unattached accounts based on same email or password
- Password is salted and hashed, so we can only use raw password during login
- Auto-attaching of accounts during login enabled May 2013.
- Auto-creation of global account if all unattached accounts match during login enabled October 2014

Attached accounts per day



HHVM memory leak

- Around December 2014 users started reporting OOMs during login
- Even visiting Special:MergeAccount would OOM for some users
- Brett Simmers of Facebook found a memory leak in the bitwise xor operator
- Auto-migration re-enabled February 2015

Global rename

- Write a global version of Special:Renameuser
- At one point this was implemented through a JavaScript tool that would do local renames on individual wikis
- First version in CentralAuth used database locks, custom object cache table (December 2012-May 2013)

Global rename v2

- Used a database table to maintain state of renames
- Logged users out during the rename
- Special page for users to see the status of their rename across wikis
- October 2013-July 2014

Special:GlobalRenameUser

Special page

Rename global user

Rename global user

Current username

New username

Reason

☒ Move user pages

☐ Suppress creation of redirects

Special:GlobalRenameProgress

Special page

Global rename progress

View global rename progress

Username

Log entries

- 08:39, 15 May 2014 Admin (Talk | contribs | block) globally renamed Zomg to Zomg2 (*dddd*)

List of local accounts

Local wiki	Status
test.wikidata.org	In progress
www.wikidata.org	Queued

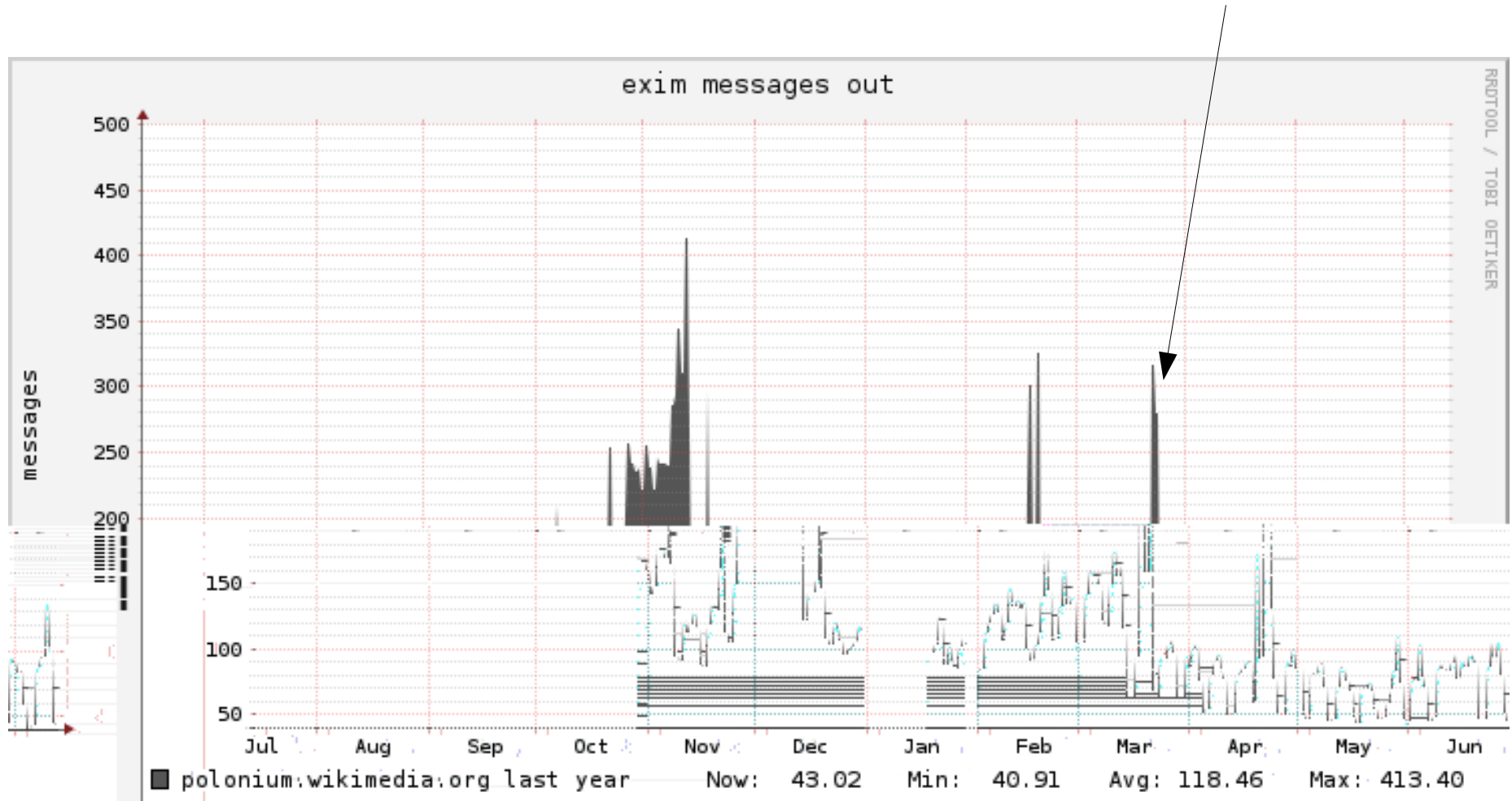
Global rename v2.5

- Moved logic out of SpecialPage class
- Split up said logic into multiple classes for easier test-ability
- Deployed July 2014
- Been used 11,500+ times
- Global renamers group to help stewards

Email reminders

- People set their email address, but never confirmed it
- In the process discovered users with invalid emails (e.g. “querty”), ended up removing 218,598 emails across all wikis
- Localized in ## languages
- Sent out ~89k emails
- Unsure of overall impact

Email reminders



Global rename request

- Simple form that works on all wikis to request a new name
- No need to deal with wikitext templates and auto-clerking bots
- Localized by MediaWiki
- Works for users without a global account
- Requires confirmed email
- Automatically put into queue for global renamers and stewards to review and process

Unification rename request

Request a new username to be known by across all projects.

All of your previous contributions will be connected with this new username.

Once you have requested a new username, a notification will be sent to Wikimedia stewards to perform the rename. You will be notified by email when this process is completed.

Current username: Test11

This is your username now.

Requested username:

Enter the new username you wish to use, e.g.,
"Test11546".

Email address: [? Why?](#)

Enter your email address.

Confirm email address:

Enter the same email address you entered
above for confirmation.

Reason for request

Request name change

Queue view

Global rename request queue

Open requests		Closed requests					
Username	Requested username	Local wiki	Open date	▼ Close date	Status	Done by	Action
Test111	Test111-renamed		15:00, 8 April 2015	16:21, 8 April 2015	rejected	Admin	View
Test5945	Test5945896		17:09, 19 March 2015	17:10, 19 March 2015	approved	Test5945896	View
Test5	Test5945		16:54, 19 March 2015	17:06, 19 March 2015	approved	Test5945896	View
Test456	Test4566		08:19, 8 February 2015	08:21, 8 February 2015	rejected	Test456	View
Test123	Test1234		08:17, 8 February 2015	08:21, 8 February 2015	rejected	Test456	View

Rename "Admin"?

Admin is requesting a rename to **Test1o**.

- user: [Special:CentralAuth/Admin](#)
- home wiki: centralauthtest.wiki.local.wmftest.net
- new name: [Special:CentralAuth/Test1o](#)

Customizable
user links

The chosen username is similar to an existing username: [Test10](#)

Similar usernames
through AntiSpooF

Reason for requesting rename

reason!!!

Notes/reasoning

Detailed reason
emailed to user

Public log entry comment (if accepting)

Summary for
Special:log/gblrename

☒ Move user pages

☐ Suppress creation of redirects

Cancel

Reject rename

Accept rename

Rename "Admin"?

Admin is requesting a rename to **Test1o**.

- user: [Special:CentralAuth/Admin](#)
- home wiki: [centralauthtest.wiki.local.wmftest.net](#)
- new name: [Special:CentralAuth/Test1o](#)

The chosen username is similar to an existing user

Reason for requesting rename

reason!!!

Notes/reasoning

Do you really want to globally rename this user?

Cancel

OK

Public log entry comment (if accepting)



Move user pages



Suppress creation of redirects

ame

Cancel

Reject rename

Accept ren

Login with old name

- Username is how users log in, so changing it locks them out
- Scary code in CentralAuthPlugin tries to log in as “\$username~\$dbname”

Your account has been renamed

Your account **Lego-test** has been renamed to **Lego-test~testwiki** during automatic migration to the unified login system of the Wikimedia Foundation.

From now on you need to log in using your new username **Lego-test~testwiki**. Your new username is unique to you across every Wikimedia project, and if you are logged in to one project and visit another, your account will carry over with you. The [Unified login help page](#) has more information about single-user login, as well as a list of frequently asked questions. If you need to update your email address or to change your password in your [preferences](#), now might be a good time to do so.

To request a different account name, visit [Special:GlobalRenameRequest](#). Thank you for participating on Wikimedia projects.

Return to [Main Page](#).

The great renaming

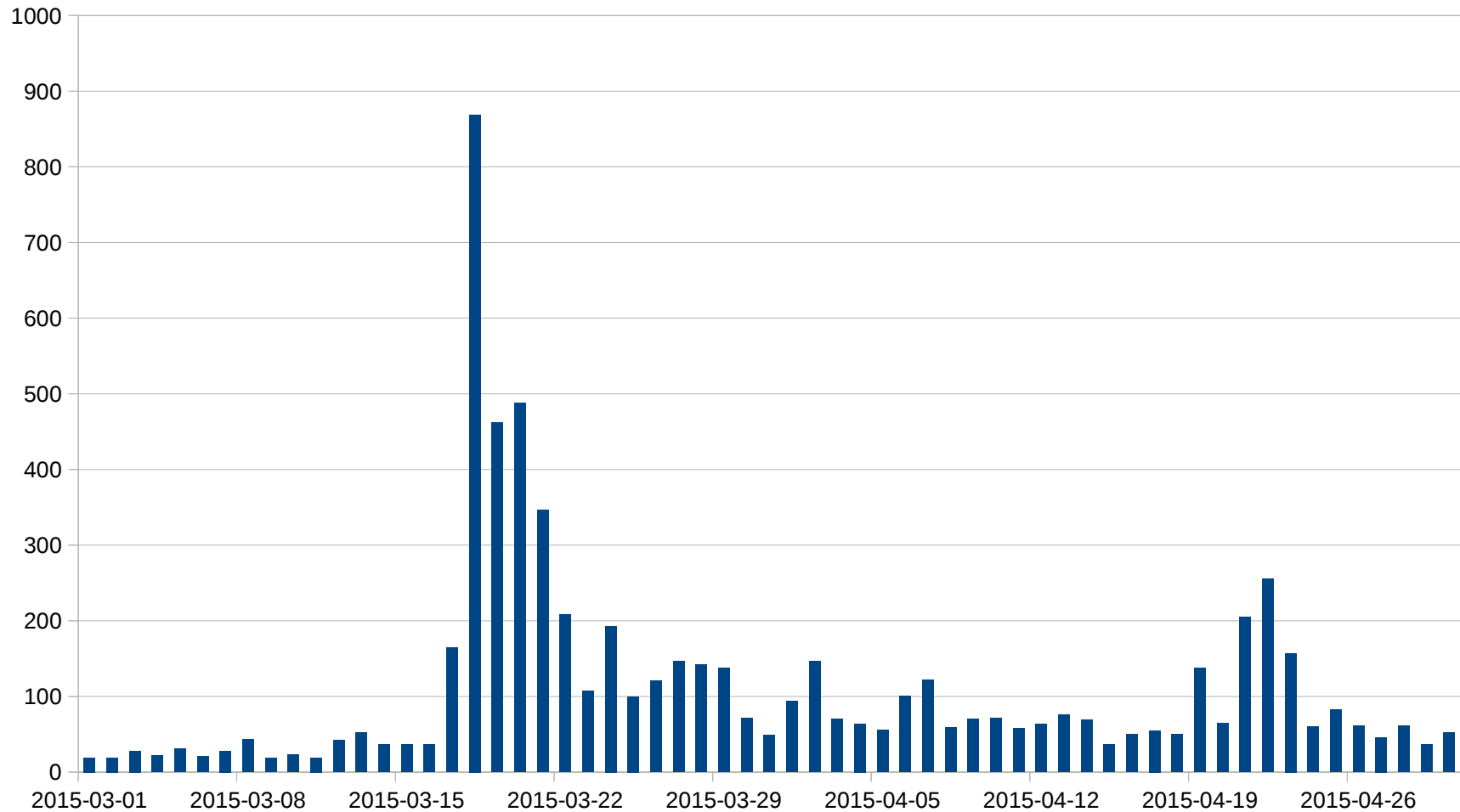
Winners and losers

- CheckUser, Oversight, Bureaucrat, Sysop groups take priority
- Edit count
- Registration (not populated for old accounts not on en.wp)
- Randomness...which was a bad idea.

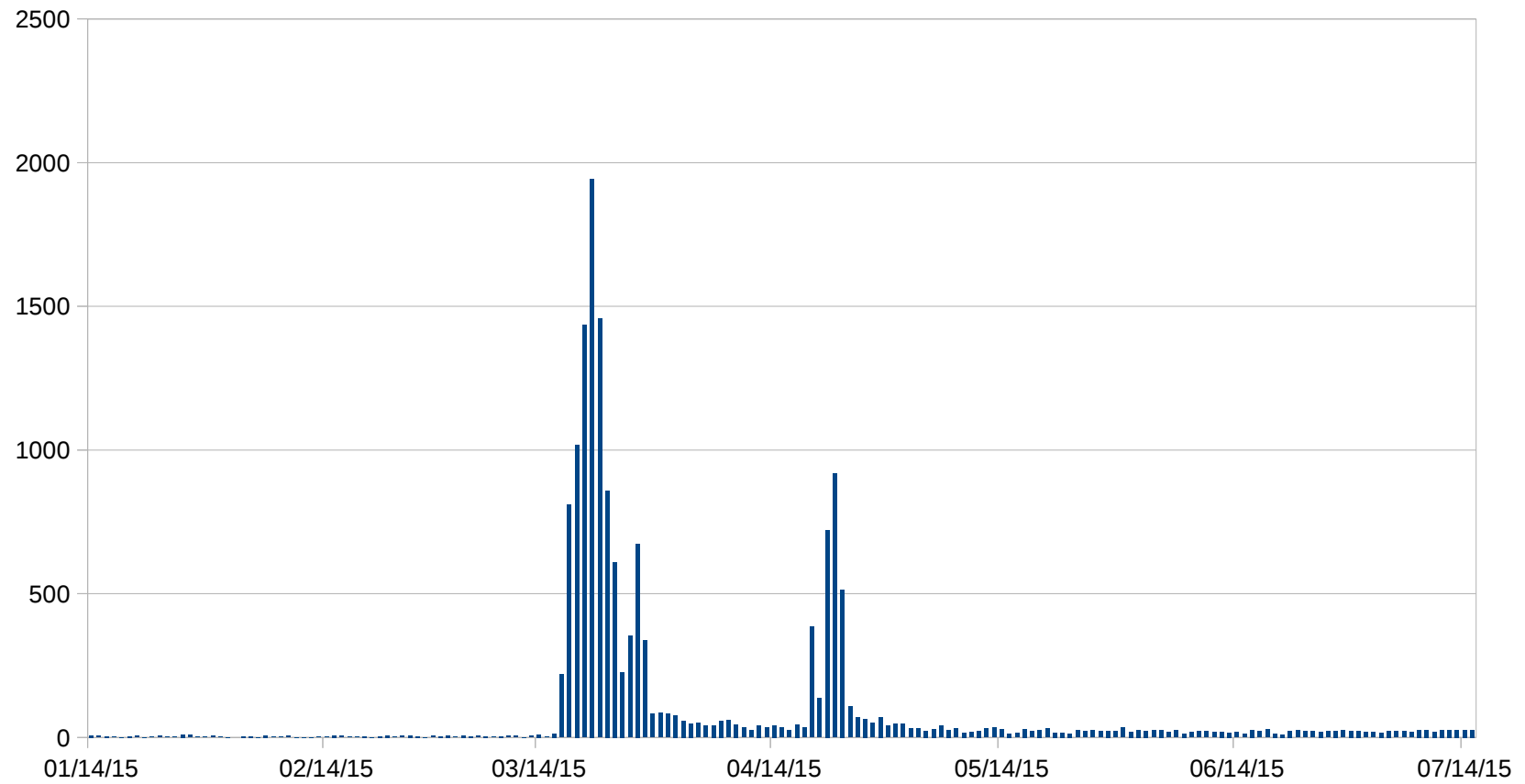
Who is being renamed?

- `Special:UsersWhoWillBeRenamed`, not super useful for large wikis
- Notifications delivered via talk page through `MassMessage`...which follows redirects
- Many accounts fixed when they went to complain on Keegan's talk page

m:User talk:Keegan (WMF)



Completed rename requests



The actual great renaming

- forceRenameUsers.php script, started on test*wikis, small, medium, large, and finished on enwiki.
- Special job runner loop set up for global rename jobs
- User:Maintenance script flagged as a bot to avoid spamming RecentChanges
- Post-rename notifications sent through MassMessage
- April 15 – April 22, 2015

The actual great renaming

- S3 master had 22k queries/second, lowered concurrent renames
- Suffixes caused usernames to be longer than 64 chars. Bumped to 85 (~zh_min_nanwiktionary).
- Underscores in database names aren't valid in usernames
- User:Oversight, User:Steward were exempted from renaming
- User:UBX renamed to User:UBX~enwiki (and User:Js~ruwiki), pages manually moved back
- User:~~ on nlwiki → User:~~~nlwiki ??

What's next?

AuthManager

- MediaWiki's authentication stack sucks.
- Will enable two-factor authentication
- Better support for external auth databases (like CentralAuth!)
- Implementation in progress

GlobalUserMerge

- Will merge multiple global accounts together for people who did not have a complete SUL
- MediaWiki was not designed to do this.
- Very, very sketchy.
- We ran a production test that exposed some large bugs

Features now available to all

- GlobalCssJs
- OAuth
- GlobalUserPage

Better cross-wiki integration

- Disclaimer: I'm not promising any of these things
- Cross-wiki Echo notifications
- Cross-wiki Flow discussions
- GlobalUserPages showing up even if you don't have a local account
- GlobalPreferences??

Team effort

Aaron Schulz, Addshore, Alexandros Kosiariis, Amire80, Brad Jorsch, Brandon Harris, Brett Simmers, Brion Vibber, Bryan Davis, Chad Horohoe, Chris Steipp, DerHexer, Deskana, Erik Möller, Gergő Tisza, Giuseppe Lavagetto, Glaisher, Greg G., Hoo man, James Alexander, James F., Jeff Green, Keegan, Krenair, Legoktm, M4tx, MZMcBride, MaxSem, Microchip08, Nemo_bis, Ori Livneh, Paladox, Peter Gehres, Quiddity, Rachel diCerbo, Reedy, Risker, RobLa, Sean Pringle, Shanmugamp7, Shirayuki, Siebrand, Stefan2, Stryn, Tim Starling, Tony Thomas, Trijnstel, Umherirrender, Xeno, YuviPanda, Stewards, Global renamers, translators, tech ambassadors, and many more.