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Migrating to
Magento 2.0
Set right your plans

Magento 2.0, the **ecommerce platform for the future** is built on an entirely new architecture and is much faster, optimized, and user-friendly. This White Paper lays out the necessary guidance and best practices for planning your migration to Magento 2.0.

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Intro

Hailed as the world's #1 ecommerce platform, Magento1.x is now all set to change your e-store with the all new *Magento 2.0*- the ecommerce platform for the future. The benefits of migrating to **Magento 2.0** are plenty. To achieve the desired results from this migration, it is inexorable to have a well laid migration plan along with sufficient quality assurance measures.

This white paper aims at giving valuable insights into the various steps involved in migrating to Magento 2 with a note on how that can help your business grow.

Magento 2.0 was launched in November 2015, after a long wait. The new platform is built on an entirely new architecture and is much faster, optimized, user-friendly, compared to the incumbent Magento 1x versions. However, users still have their task cut out migrating to the new version.

The Challenges

The limitations of the migration tool

Magento offers a migration tool that makes it easy to transfer the data residing in Magento 1.x websites, to the new Magento 2.0. While data relating to store setup, orders, customer profiles, products, promo rules and others can be migrated easily this way, the migration tool has certain limitations. The tool cannot transfer media files, storefront designs, and Access Control Lists (ACL). These data types have to be transferred manually.

The migration tool does not transfer theme and code customizations either, and this holds true for third party extensions as well. The only workaround is to redo these in Magento 2.0. The idea is to convert this challenge into an opportunity, to undertake a visual and functional revamp of the site, getting rid of bloated legacy code, and redoing things in a better way, to improve the overall usability of the site.

Downtime and maintenance

The actual migration process will inevitably cause downtimes and maintenance, and sucks in resources. The only solution is to refrain from undertaking the migration during peak seasons, and in times of high traffic, such as in the middle of popular shopping seasons. Make sure traffic is lean when the migration takes place.

The actual migration for a normal Magento site requires only about 10 minutes or so, but the preparatory works can extend to several days, and resolving any glitches that turn up as a result of the migration can take up quality time as well.

The level of effort to migrate from Magento 1.x to Magento 2.0 depends on several factors, such as how the site is built, and the level of customization. An average Magento 2.0 migration is about 20% larger than a standard Magento 1.x upgrade.

Lack of compatible themes and extensions

Although Magneto has officially launched the 2.0 version, it is still in its infancy. Not all themes and extensions are yet available for Magento 2.0. The Magento community is working overtime to upgrade existing extensions and themes, but not everything is compatible as of now. The best option is to wait until all the required themes and extensions are available. Also, use the community forums to get an idea of the timelines, or even push for an upgrade of your required themes and extensions.

When to migrate-
the timing

Having factored in the challenges, it is a good idea to evaluate **when to make the migration.**

It is a no-brainer to use Magento 2.0 for any new Magento project. However, an immediate or compulsory upgrade to Magento 2.0 is neither necessary nor recommended for many existing users. If the existing website is running smoothly, there is no real need to go in for an immediate upgrade. As the adage goes, "if it ain't broke, don't fix it." Magento is committed to support the incumbent Magento 1.x versions for three more years at least.

Migrating existing websites makes sense in the following circumstances:

- For recently set up websites with little traffic now, it is a good idea to start the migration process right away, before the website gains traction and the effects to downtime can become telling.

- Websites running legacy versions, older than Magento 1.8 CE and Magento 1.13 EE would do well to migrate at the earliest, as support for these older versions are no longer available.

- Users looking for an immediate or near term improvement to their e-store's performance from existing level would need to upgrade, and make the new investments in Magento 2.0.

- When performance issues start kicking off, as they inevitably do with time, migration may be the best solution. If the website is found to be in need of some functionality, appearance, and if a new extension or theme is required to set it right, upgrading to Magento 2.0 is the best option.

- When the website has many third party extensions installed, migration may have to take place sooner rather than later. The third party extensions may no longer be supported by legacy versions, going forward.

All Magento users would eventually have to Migrate to 2.0, but there is no immediate urgency to it.
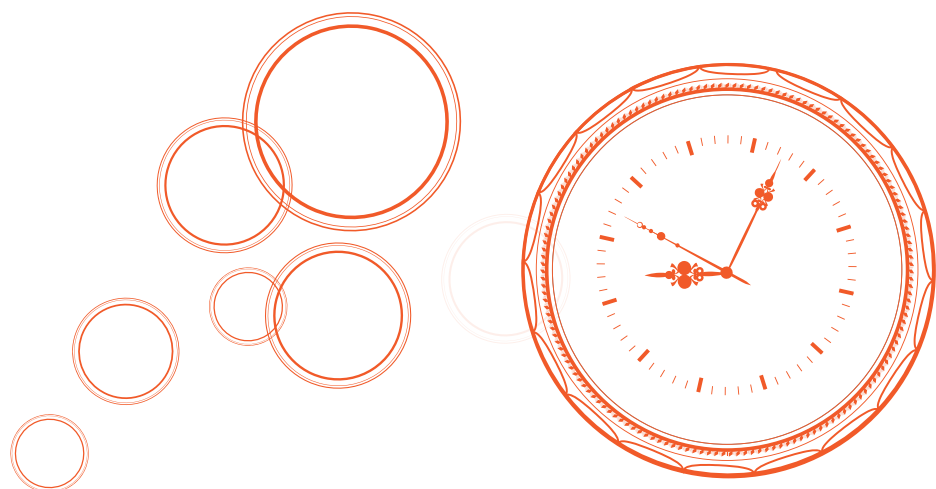
Advantages of migration

Migrating to Magento 2.0 would be worth the effort, for the **several advantages** it brings along.

Magento 2.0 is a fresh start, on a clean slate, with legacy extensions or old, bad code removed. The code base has undergone a major overhaul- there is a new and powerful visual editor, and new 'containers' for on-site handling of visual elements. Magento 2.0 also removes several glitches, offers major performance improvements, and enables websites to deliver several functionalities not available in the legacy 1.x versions. Migration to Magento 2.0 can power the ecommerce website to a whole new level, and recoup several times the investment and effort, and for this reason, an early migration may be in the best interest even if there is no pressing need for it.

Here is a run-down of the significant improvements migration would bring about.

- Both Magento 2.0 Community and Enterprise editions offer built-in full page caching, both proactive, and materialization. Hitherto, the web server had to effect huge volumes of slow database queries to render a page. Full page caching ensures the system building out all of the pages in a static file system, speeding up page load times to one or two seconds from the five to ten seconds it usually takes for non-cached pages. This delivers a big boost in performance.

- Magento 1.x has a rather complex default checkout, with about 80% of existing Magento ecommerce sites having modified their checkout process to streamline the procedure. Magento 2.0 removes the glitches connected to checkout, and streamlines the process. The process now assumes guest checkout, and existing customers can still log out without having to remember their password. The process also removes avoidable irritants, such as users having to choose credit card type, when it can be automatically ascertained from their credit card number.

- Large scale Magento Enterprise and Magento Community sites experience performance issues, with "table locking" setting in when so many people try to place orders on a particular site. For instance, when 100 people try to check out per minute, the system generates queries that take 1 second to execute, leave alone the time it takes for locking a table to write. The net result is the system crashing down, as many system admins have found out the hard way. Magento 2.0 Community and Magento 2.0 Enterprise reduce this issue considerably.

- Magento 2.0 Enterprise makes it possible to separate databases, with one MySQL database for serving content pages, product and category pages, and a separate database for check-out. This enhances the performance, with people trying to checkout not bogged down by people simply browsing the webpage. This is a huge advantage for bigger sites.

- Magento Enterprise edition offers several key features such as admin logging, RMA, personalization, advanced customer segmentation, gift registry, better PCI compliance, gift points and more, as built-in functionality. Users no longer need to seek recourse to third party modules to realize these functions.

Known Issues

One **big issue** facing those trying to migrate to Magento 2.0 now is the lack of many required extensions and themes. Magento 2.0 is officially launched, but developers are only working on making themes and extensions compatible with the new version, and it inevitably takes time to ensure everything is available. Users contemplating to migrate need to evaluate whether the required extensions and themes are available in Magento 2.0, and if not, either plan a workaround, or wait for these to become available.

Another issue is Magento 2.0 requiring extra resources, especially when the site improvements bring in more traffic. Users planning a migration need to check if the hosting provider has the adequate capacity to host Magento 2.0 without any issue, and can sustain and support the website when traffic scales in future. If the hosting provider is not capable of scaling up the resources as required, it may be time to have a relook at the hosting plans as well.

Available Support

The power of Magento lies in its community. It is still early days for Magento 2.0, but extension developers have already started to build for Magneto 2.0, and companies are training their developers for the new platform. It inevitably takes time for the community to mature, and things to settle down, but excellent community support is already available for those who seek it out.

Magento Connect is gradually getting replaced with a real app store, revolving around sharing the extensions no matter the change. Magento proposes to bring in a verification process for extension developers. While this may reduce the number of extensions, it would improve the quality of available extensions, and merchants will be able to find the extensions they require sooner. Users can also install these reviewed extensions with confidence that it will not break the system.

The next step: the migration plan

After reviewing the need to migrate, and being committed to it, it is important to **have a roadmap.** While there are no hard and fast rules to go around migration, here is a roadmap that makes sense of the whole process, and allows project managers to remain in control throughout.

1. Create Magento 2.0 compatible assets

* Review the legacy website, and identify any unnecessary extensions and other assets that are best dropped, and the extensions, themes, and database that need to be migrated.
* Create a timeline to redo the customized themes and extensions, as required.
* Deploy the extra capacity required, from the hosting provider.
* After everything is in place, create a fresh installation of Magento 2.0.
* Post installation, back-up or dump the Magento database as soon as possible.
* Install the required extensions on the fresh Magento 2 store.

2. Migrate Data and other Legacy Assets

After the new Magento 2.0 site is up and running, it is time to migrate the data

* Install the Magento migration tool, and ensure it has access to both Magento 1.x and Magento 2.0 databases.

* Stop all cron jobs and the activities taking place in Magento 1.x admin panel, other than essential order management jobs. Do not resume the activity until the migration process is completed and the Magento 2 site is live. This entails some amount of downtime.

* Manually transfer all media files from Magento 1.x site to Magento 2.0 site, and use the Magento migration tool to migrate the settings to the Magento 2 site.

* Use the migration tool to transfer Magento 1.x database to the Magento 2.0 database. Both databases would have different structures, but the migration tool takes care of the process seamlessly. However, for extensions that use their own data, it may be necessary to use the mapping files that come with the data migration tool.

* Re-index the Magento 2.0 site post database transfer.

* Conduct a thorough testing of the new Magento 2.0 website.

To enable Magento 2.0 site to go live, place the Magento 1.x site in maintenance mode, stop the migration tool, start Magento 2.0cron jobs, and point the DNS load balancers to the new production hardware. The new site is now live!

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Magento development
best practices

It may be worthwhile to consider adopting the following best practices when effecting migration to Magento 2.0:

- When undertaking the actual migration, most of the activities that take place in the Magento 1 admin panel are stopped. However, some things could still remain. For instance, some order processing issues may have been going on, or there could be new user reviews or changes in customer profiles during this time. Apply incremental updates to migrate such left over data as well.

- Create a duplicate of the Magento 1.x database before migration, and connect the Magento 2.0 to the duplicate database. It not only prevents the disaster of accidental data loss if anything goes wrong, but also eliminates unessential data, such as recently viewed records, outdated promotional rules, legacy order quotes, and more, from the migration process.

- Finally, avoid the temptation to make code changes during the migration process, when several bugs may come to light. Hold on the changes until the migration process is complete.

Migration to Magento 2.0 requires significant investment of time and resources, and a carefully laid out plan. But the results make it worth the while.

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About Suyati

Suyati provides marketing technology and integration services for companies that wish to combine the best of breed solutions and create a unified approach to customer acquisition. This unified digital marketing approach requires system integration between various CMS and CRM platforms, and a slew of e-commerce, Marketing Automation, Social Media Listening, email and social marketing, and customer service systems. Our specialized knowledge in Salesforce, open source and .Net based systems enables us to build effective custom integrated solutions for our clients.

Suyati's custom technology solutions have been deployed in companies in the US, Western Europe and Australia, and have helped many enterprises leverage the web/cloud/mobile technologies to acquire customers through integrated digital marketing. Suyati is based in Chicago with product engineering capability out of the US and India.

More at: **www.suyati.com**   Get in touch: **services@suyati.com**

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