The Technology & Integrated Communication Agency

GCLOUD

SERVICE DEFINITION

Magento1.x to 2.x Migrations

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Making Contact

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The Technology & Integrated Communication Agency

Affinity expert in Magento Migrations

As part of Affinity's' migration process we will conduct an in depth review of your site's code measured against Magento's core code and general best practices. Our audit will examine the whole platform architecture, from front-end to back-end. The full analysis will identify any areas for enhancement and highlight issues with the code, module implementation and Magento best practice. Ensuring your ecommerce platform can be upgraded correctly and is optimized to support your current and projected business requirement.

Start with a Code Audit

Our Audit team is very experienced in providing consultant-level Magento code audits for both Magento CE and Magento EE platforms. Any developer working on your audit will have practical experience of applying the fixes on large, enterprise-level websites, as well as conducting the actual audits.

The audit will be very well documented with supplemental spreadsheets and screen grabs to help illustrate and back up the recommendations proposed.

The audit delivered will include a traffic lighted list of changes required, which are ordered by impact and level of complexity to address.

The Magento audit will encompass

- A full codebase review

- Identify if any changes have been made to the Magento core

- Address any code/module conflicts

- Document module and extension usage

- A full Magento performance review

- Review hosting architecture and logs

- Review of optimization in place with recommendations

- Report on status of database

- Action plan

The Migration Process

Affinity's experienced and deeply technical team of Magento engineers offer end-to-end Magento 2 upgrades, including support and enhancement.

Upgrades have a nasty habit of not going as planned! Things can go wrong with the actual upgrade itself, in addition to the site performance following an upgrade. Affinity ensures it is as well prepared and informed as possible going into the upgrade, and will coordinate extensive testing before pushing the upgraded to the public facing live site. The upgrade will always be executed and subject to internal QA on our test environment with a test database before it is released to our clients test environment (usually part the live architecture) and only when thoroughly tested by our client and/or a 3rd party service and signed off would we start the transition to live process. With the appropriate planning and risk mitigation in place, there should only be about 15-20 minutes of downtime for the Actual transition process

One of the benefits of using Affinity for your upgrades is the experience we bring to the table. We are fully conversant with the risks associated with upgrades and typical extension incompatibilities with the new Magento version. Indeed some extensions used may not even have been upgraded for the new Magento version yet, which means we will need to either replace them or update them ourselves for you. It is also common to lose functionality due to poor Magento code customizations. Again our experience tells us where to look and how to mitigate the risk. The same applies to theme incompatibilities and data that needs to be migrated manually - There are three types of data that need to be manually migrated: Media, Storefront design, Admin user and ACLs (Access Control Lists)

It is also very important we take into account the system requirements for the new Magento version and ensure the hosting architecture is still fit for purpose.
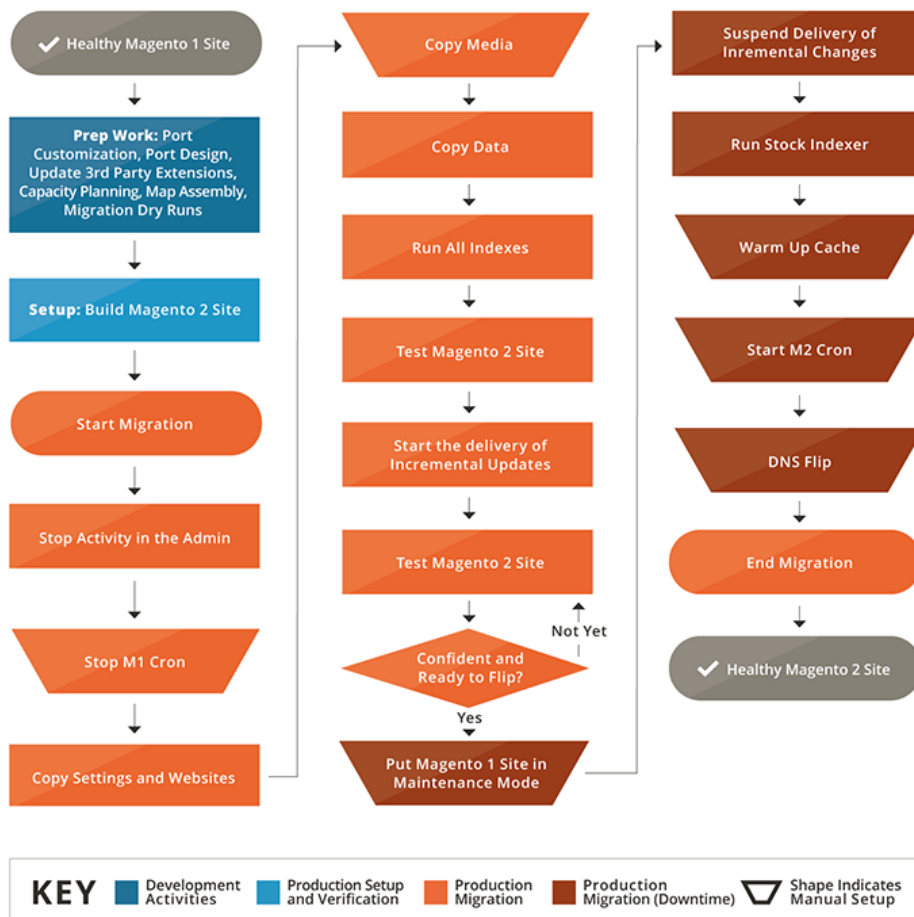
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The Four Components of Magento Migrations

A Magento 2 migration involves four components: data, extensions, themes, and customizations.

- Data: Magento has developed the Magento 2 Data Migration Tool to help us efficiently port all of your key product, customer, and order data, store configurations, promotions and more to Magento 2. Affinity is conversant with this tool and best practices for using it to migrate your data

- Extensions: The Magento development community are working on updating extensions. They will be added on to the Magento Marketplace as they become available. In the meantime Affinity can find an alternative or upgrade the extension ourselves. As part of the process will also review the extensions you are using, some of which may be replaced by functionality now brought into Magento2.

- Themes and Customisations: Magento 2 uses several new approaches and technologies that give merchants an unmatched ability to create innovative shopping experiences and scale to new levels. To take advantage of these advances, we will need to make changes to the themes and customizations for you all of which will be discussed and planned as part of the migration process.

The following diagram illustrates the migration flow in general:

Document: Magento1.x to 2.x Migrations Service Definition		Version: 8.0	Date: 23/06/2016
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Illustration courtesy of Magento Developer documentation (2.0)

The 6 steps to a successful migration plan*

A successful migration depends upon careful planning and testing.

Step 1: A Review of your current site

- What extensions have you installed?

- Have you identified if you need all these extensions in your new site? (There might be old ones you can safely drop.)

- Have you determined if Magento 2 versions your extensions exist? (Check with your extension providers to see if they have been ported yet.)

- What database assets from your extensions do you want to migrate?

Step 2: Capacity planning

Consider whether the new site needs to be designed with more hardware or a more advanced topology with better caching tiers and so on. It's a good time to make more serious changes to get your site ready for your next level of growth.

Step 3: Build and test Magento 2

To prepare for the migration, make sure you do all of the following:

- Set up a Magento 2.0 system using a topology and design that at least matches your existing Magento 1 system

- To provide redundancy in the event of unexpected issues, we advise you to replicate your Magento 1.x database and use this Magento 1.x data for your migration

- Install Magento 2.0 (with all modules of given release) on a system that meets our system requirements

Step 4: Start your migration

1. Make sure that the Data Migration Tool has a network access to connect to Magento 1 and Magento 2 databases. Open ports in your firewall.

2. Stop all activity in the Magento 1.x Admin Panel (except for order management, such as shipping, creating invoice, credit memos etc.)

NOTE: Activity cannot resume until your Magento 2 store goes live.

3. Stop all Magento 1.x cron jobs.

4. Use the migration tool to migrate settings and websites.

5. Copy your Magento 1.x media files to Magento 2.0. (You must copy these manually from from magento1-root/media to magento2-root/pub/media directory)

6. Use Data Migration Tool to bulk copy your data from Magento 1 database to Magento 2 database. If some of your extensions have data you want to migrate, you might need to install these extensions adapted for Magento 2. In case the extensions have a different structure in Magento 2 database, use the mapping files provided with the Data Migration Tool.

7. Reindex all Magento 2.0 indexers. For details, see the [Configuration Guide](#).

8. Thoroughly test your Magento 2.0 site.

Step 5: Incremental updates

Now that you've migrated your data, you must incrementally capture data updates that are added in Magento 1 store (such as new orders, reviews and changes in customer profiles) and migrate it to Magento 2 store.

- Start the incremental migration; updates run continually.

- Test your Magento 2 site during this time so you can catch any issues as soon as possible. In case you find any issues,

- Volume check warnings may appear in case you conduct testing of your Magento 2 site and run migration process at the same time. It happens because in Magento 2 you create entities that do not exist in Magento 1 instance.

Step 6: Go live

Now that your Magento 2 site is up-to-date with Magento 1 and is functioning normally, do the following to cut over to the new site:

1. Put your Magento 1 system in maintenance mode (DOWNTIME STARTS).
2. Press Control+C in the migration tool command window to stop incremental updates.
3. Start your Magento 2 cron jobs.
4. In your Magento 2 system, reindex the stock indexer. For more information, see the Configuration Guide.
5. Using a tool of your choice, hit pages in your Magento 2 system to cache pages in advance of customers using your storefront.
6. Perform any final verification of your Magento 2 site.
7. Change DNS, load balancers, and so on to point to new production hardware (DOWNTIME ENDS)
8. Magento 2 store is ready to use. You and Your customers can resume all activities.

courtesy of Magento Developer documentation best practice (2.0)

Focus on Testing

Once the upgrade has taken place, we need to run our test plans to ensure the core functionality of the Magento site is still working as expected. Typically we will focus on:

- Putting Magento 1 in maintenance mode and permanently stop all Admin activities
- Start Magento 2 cron jobs
- Flush all Magento 2 cache type
- Reindex all Magento 2 indexers
- Change DNS, load balancers, and so on to point to Magento 2 production hardware
- Critical path testing.
- Ensure you do end to end testing on all product types.
- Conduct full test checkouts with test payment gateway and ultimately live
- Test bespoke functionality thoroughly such as price rules and fulfilment.
- Test all the extensions to ensure the version is compatible with your upgraded Magento.