# Kentico+

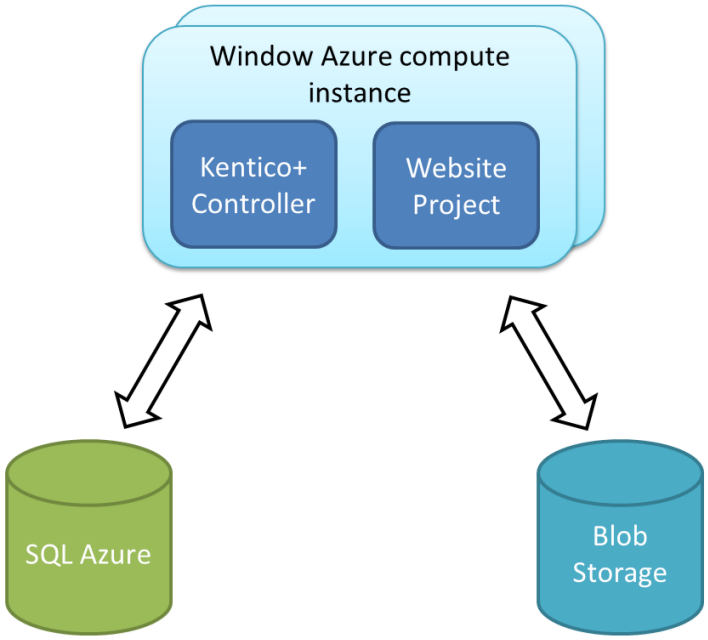
## USER'S MANUAL


www.kentico.com

# Kentico+ overview

Kentico+ allows you to run Kentico EMS as a Service (SaaS) in the Windows Azure cloud. That means that Kentico takes care of hosting, backups and upgrades for you.

Kentico+ runs on the Windows Azure cloud service. The diagram below shows the structure of the service:




Architecture overview

As you can see in the diagram, Kentico+ uses three different Windows Azure services:

- Windows Azure compute service
- Windows Azure blob storage
- SQL Azure

The **Windows Azure compute service** is where your website project runs. The Kentico+ Controller, which is the application that performs maintenance tasks (e.g., database backups), also runs on the Windows Azure compute service.

The **Windows Azure blob storage** is used to store different types of files:

- uploaded content files (e.g., media files)
- custom code files
- service configuration files
- backups

Kentico+ uses **SQL Azure** as the backend database for client websites.

If you want to learn more about how Kentico EMS operates in the cloud, read the **Architecture** topic in the **Windows Azure deployment** guide.

### Limitations

In the first version of Kentico+, we offer only Kentico EMS. Additionally, each Kentico EMS project needs to run as a separate compute instance. We will support more Kentico EMS projects within a single compute instance in the future. Nevertheless, you can manage multiple websites within a single Kentico EMS project today.

All limitations for Kentico EMS websites running in Windows Azure are the same for Kentico EMS+ instances. You can read the list of limitations in **Installation & deployment -> Prerequisites & limitations** topic in **Windows Azure deployment** guide.

# Creating the service

## Before you start using the service

After you sign up for the service at http://www.kentico.com/Plus, you will need to fill out the form at the following URL:

http://www.kentico.com/SaaS-form

In the form, you should specify the parameters of your new Kentico+ service. The **Project name**, **E-mail addresses** and **Primary DNS domain name** are required fields. You can leave the other fields at their default values.

- **Project name** – the name that will be used as the prefix for your base address.
- **E-mail addresses** – the addresses you'll use to communicate with us.
- **Primary DNS domain name** – the host name of your future website. You should own the specified domain. Please refer to the **DNS domains** chapter for more details.
- **Primary protocol** – the internet protocol that you want to use. You can choose either the standard HTTP protocol or its secured version – HTTPS (SSL).
- **Primary port** – the port that you want your site to run on. The default value for HTTP is 80 and 443 for HTTPS.
- **SSL certificate** – the file with your SSL certificate. The field is available only if your selected primary protocol is HTTPS. Kentico+ doesn't require SSL; however, it's a good security practice to give users the ability to connect via an encrypted channel. If you wish to use SSL, you need to obtain a certificate yourself.

- **Certificate password** – the password associated with your SSL certificate. The field is available only if your selected primary protocol is HTTPS.
- **Binding information for temporary website** – the parameters of the temporary website that the Kentico+ Controller creates when applying upgrades and hotfixes. You can find more information about temporary websites in the **Temporary website** section of this document.
    - **Use primary domain name** – indicates if the Controller should create the temporary website with the same domain name as the primary website. If true, you will need to specify only a different port.
    - **Temporary site port** – the port you want temporary sites to run on.
    - **Temporary site DNS domain name** – the host name you want the temporary site to run on.
    - **Temporary site protocol** – the internet protocol that you want to use. You can choose either the standard HTTP protocol or its secured version – HTTPS (SSL).
- **Service mode** – the extent to which you will be able to manage the code of the application. You can choose between the **managed** mode, where the web project code is provided and administered by Kentico, and the **unmanaged** mode, where you will be fully responsible for the whole website codebase. Refer to the **Service modes** section of this document for more details.
- **Unmanaged file name** – the name of the unmanaged web project codebase file. This value is required only if you chose the unmanaged service mode. Refer to the **Service modes** section for details.
- **Kentico EMS version** – the version you wish to use in the format "6.0.<hotfix number>. The default value is 6.0.23, which is Kentico EMS 6 SP1, but you can start with any other hotfix.
- **Data center** – location of the data center where you want to host your service.
- **Starting sample site** – the sample site you want installed on the service. You can select (none) to create the service without any sample sites. Kentico EMS+ contains templates of all sample sites so you will be able to create a new site from any template (or from scratch) at any time.
- **Windows Azure instance type** – the virtual machine instance type in Windows Azure that you want the service to run on. The standard plan contains the **Small Instance**, larger instances are charged extra according to the Windows Azure price list. Instances vary by number of CPU cores, Megabytes of RAM memory and size of local disk.
- **Number of instances** – the number of instances of the application that you want to run. The standard plan contains single computing instance. If you're looking for higher performance or availability, you can choose two or more instances. Additional instances are charged extra according to the Windows Azure price list.

Please note that you can change any of these parameters at any time by sending us an e-mail at plus@kentico.com.

### TEMPORARY WEBSITE

When applying hotfixes and upgrades to a Kentico+ service, the Kentico+ Controller creates a copy of the updated website and performs the update on the temporary copy to make sure that the update doesn't cause any problems. Refer to the **Application update** section under the **Service maintenance** chapter of this document for details.

In the start form, if you uncheck the **Use primary domain name** box, you can specify a domain where the temporary site should run (for example, *temp.yourdomain.tld*). Otherwise, only the default port will change to 8000, so the temporary site can be accessed at, e.g., *http(s)://yourdomain.tld:8000*.

### SERVICE MODES

Kentico+ offers two service modes – **managed** and **unmanaged**. These two modes differ in the way the code of the website is managed and how updates are applied.

In the managed mode, Kentico automatically applies hotfixes and upgrades to your website and performs all configuration changes that you request. However, you won't be in control of the website's code files. You will only be able to enhance the website project by adding your own files, such as web parts, controls and pages.

If you choose the unmanaged mode, you will be fully responsible for all code files. We won't take care of the code and won't apply upgrades or hotfixes. In exchange, you will be able to customize any part of Kentico EMS system files and make adjustments to the web.config file. You will also be able to modify the database.

If you wish to use the unmanaged mode, you will need to specify the name of the ZIP package with your customized Kentico EMS+ project. Kentico+ Controller will search for the specified file name when you synchronize packages to Kentico+ instances.

### DOMAIN NAMES

Before you can start using the service, you need to register a domain name and enter it into the start form. By default, your project will be accessible by two URIs:

*http://www.yourdomain.tld*

*http://yourdomain.tld*

If you want your website to be accessible via subdomains, such as *blog.yourdomain.tld*, send us a list of the subdomains in an e-mail.

After the service is created, you will receive a **base service address**. You will then need to connect all domain names that you want to use with the base address by creating CNAME

records for the domain names. If you're not sure how to do that, contact your domain name registrar.

If you don't own your domain yet, you can add new records to the following file:

*C:\Windows\System32\drivers\etc\hosts*

In the hosts file, you can map the IP address of the base server to your desired host names.

1. Open the Windows Command line.
2. Type the following command and press Enter:
   `Ping <your base address>`
3. Read the IP address off the first line of the command output. The address should appear enclosed in brackets (e.g., *[255.255.255.255]*).
4. Add the IP address (without the brackets), followed by a space and the domain name you want to use on a separate line in the *hosts* file. You can add as many lines as you like.
   The following is an example what the added IP–host name pairs could look like:
   ```
   127.0.0.1 www.yourdomain.tld
   127.0.0.1 yourdomain.tld
   127.0.0.1 blog.yourdomain.tld
   ```

## First steps

After you fill in the form, we will set up the service and send you a confirmation with the following information:

- **Credentials to your Windows Azure blob storage service account** – these will allow you to log in to the storage where all files related to your project are stored – website content files, backups and logs. You will also use this storage service for synchronization of custom code files. Before you connect to the storage, read the **Storage service structure** chapter.
- **Base service address** – an address in the form *<project name>.cloudapp.net*. The base address doesn't serve any content and returns an access denied message when requested. You will need to map your domain names to this address using CNAME records. Adding CNAME record depends on your domain registrar.
  If your domain registrar is GoDaddy.com, see the instructions in their documentation, under Adding or Editing CNAME Records.
- **Service identifier** – a unique identifier of your service.
- **SQL Azure database credentials** – you can use these credentials to connect to your SQL Azure database. See the **How to connect to a database** topic under the **Using the service** chapter for more details.

From this point on, your Kentico EMS+ web site is ready and you can explore it. First, you should configure your DNS or hosts file.

Then, you can access the site via the domain name you provided in start form. Because it's a standard Kentico EMS website, you can log into the administration interface (CMS Desk or Site Manager) with the user **administrator** and blank password. For security reasons, we strongly recommend to change your password as soon as possible.

You can also connect to your storage and add some content or custom code files. The rest of this document describes how you can do that in more detail.

## Storage service structure

To access your blob storage contents, we recommend that you download the CloudBerry storage explorer for Blob storage or a similar tool.

When you connect to the storage service, you will see the following containers:

- **backup** – contains a backup of your code files and SQL database. Refer to the **Backups** topic for more details.
- **cmsstorage** – contains all website content files.
- **cmscustomcode** – container dedicated to put your custom code files there. Refer to the **Project customization** topic for more details.
- **config** – contains configuration data. Do not change anything in this container. Otherwise, you might corrupt your running website.
- **logs** – stores service logs. Each application instance has its own log file.

### FILE $CMSFOLDER$ IN THE DIRECTORY STRUCTURE

Directories in the blob storage are virtual. That means that any directory can be accessed only when it contains at least one file. To enable you to access empty directories and upload files in them, all directories in the blob storage contain a special file named *$cmsfolder$*, which has a size of 0 bytes. This file is visible only in blob explorers. Kentico EMS+ ignores this file. The file doesn't appear anywhere in the user interface.

# Using the service

## Communication channel

The current version of Kentico+ doesn't include a client portal. The only communication channel is the following e-mail address: plus@kentico.com. Please include your service identifier in all your e-mails, it helps us identify your service immediately and solve your issues more quickly.

Standard Kentico EMS issues and questions should be answered by our support department at support@kentico.com.

## Customizing the project

Kentico+ allows you to add your custom files to the project or overwrite the existing ones. It takes files from a specific location in the blob storage and copies them to the website project on all application instances.

The process depends on the chosen service mode, as described in the following text.

### UNMANAGED MODE

1. Put all your files into a zip archive and give the archive the name that you specified as the unmanaged file name when you created the service.
2. Put the archive into the **cmscustomcode** container under the **unmanaged** folder.
3. Go to the following address: **<Base service address>/SynchronizeData.aspx**.
4. Insert your service identifier into the textbox.
5. Click the **Synchronize** button.

### MANAGED MODE

1. Put all your custom files into the **managed** folder in the **cmscustomcode** container. The **managed** folder is considered a root folder of the website project. Therefore, the folder structure you create there will be reflected in the application's folder structure. There are prepared folders to help you add the files there more easily.
2. Go to the following address: **<Base service address>/SynchronizeData.aspx**.
3. Insert your service identifier into the textbox.
4. Click the **Synchronize** button.

In the managed mode, you cannot modify existing files (they are not overwritten during synchronization) but you can add your own custom files to the project. You can synchronize almost all types of files including the following:

- Web parts and user controls (*.ascx)
- ASPX pages
- Code files into the App_Code folder
- Custom libraries in the form of DLL files
- Web services (both ASMX and WCF)
- HTTP modules and HTTP handlers

Be aware that Kentico EMS+ project has same limitation as other Windows Azure deployments. When you import any code file (web part, form control, etc.) using the Kentico Import module, it will be imported only to the blob storage. You must then manually copy the imported files to the **cmscustomcode** container and synchronize them to other instances.

## Upgrades and hotfixes

The upgrade/hotfix process works in the following way:

1. You will send a request for upgrade/hotfix application (by sending an e-mail to plus@kentico.com).
2. We will create a clone of your website (temporary website).
3. We will apply the upgrade/hotfix on the clone.
4. We will inform you about the upgrade/hotfix application.
5. You will confirm that the hotfix was applied correctly.
6. We will apply the upgrade/hotfix in the same way to the production project at the time you specify (this may cause minor downtime) and delete the temporary clone of your site.

## Backups

In Kentico+, both database and your custom code files are backed up. A database backup is done automatically once per day. Custom files are backed up every time you synchronize them from storage to the service.

Backups are stored in the **backup** container in folders which are named according to the backup date. The root of the backup container contains the latest database and file backup. Database is backed up using the SQL Azure DAC export into the BACPAC format. Custom code files backup is stored as a zip archive.

Content files of your site don't have their own backup. However, Windows Azure makes three copies of each file in the blob storage in order to restore the files in case of a disaster or a hardware failure.

Backups are stored in the Windows Azure storage for one month. After that, they are automatically deleted.

You can request a restore of your database or code files by sending an e-mail to plus@kentico.com.

## Service updates

Windows Azure automatically applies Windows updates once per month. During the updates, your website can be taken offline. However, you can avoid this problem by running your service on two or more instances.

Also, some changes (such as port or protocol change) may require your website to be taken offline. You will be always informed about such situation and you will be able to schedule this maintenance according to your preferences.

## How to connect to a database

You can connect to your database using the SQL Management Studio 2008 R2 or newer. Credentials for access were included in the first e-mail you received after we created your Kentico+ service.

To connect to your SQL Azure database, you need to provide us with an IP address or a list or a range of IP addresses which you are planning to connect from. SQL Azure has a built-in firewall that denies access for everyone except for the listed IP addresses.

## Other tasks

In the first version of the Kentico+ service, there is no client management portal. For tasks other than those described above, contact us by e-mail at plus@kentico.com. The typical tasks include:

- Change of domain name, port or protocol
- Adding a domain alias
- Database restore
- Change of service mode from managed to unmanaged and vice versa