**Web Site for HPC Cluster**

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**Abstract**

This manual describes installation steps and helps you to be familiar with Web Site for HPC Cluster which is a part of UACluster2 project. For more information about UACluster2 please refer to [UACluster2 Web site](http://uacluster2.codeplex.com/).

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# Overview

The Web Site is configuration and management utility for HPC Computing Cluster which helps users to configure and submit his jobs across a Internet. So users doesn't need a physical access to computers in your organizations.

It is designed to meet following requirements:

* Tasks bulk submitting, monitoring and controlling ability.
* File Manager.
* Statistics of clusters availability and congestion.
* Information pages for FAQ and scheduler for future cluster availability.

As the site is currently in development, there is following functionality (which is less than described earlier):

* Controlling user access
* HPC jobs configuring, submitting, monitoring and controlling.
* Fully functional file manager for user working directory.
* Pages with same FAQ.

# Getting started

As the main function of Web Site utility is management jobs, files and information about cluster it is assumed that user has all Microsoft HPC 2008 necessary components already installed. Following instructions and requirements regard to Web Site operations and deployment to Microsoft HPC cluster Head Node.

## System requirements

* Installed and configured Microsoft HPC 2008 or Microsoft HPC 2008 R2 Cluster

## Deployment

Firstly, you need to download and install Web Site package to Head Node.

Secondly, you need to perform initial setup steps.

### Installation processes

* Install Web Server (IIS) role on your Head Node machine.
* Add and configure HPC web site.

### Installation of Web Server (IIS) Role on Head Node

Install Web Server (IIS) role on your Head Node, by following next steps:

Start **→** Server Manager **→** Roles **→** Roles Summary **→** Add Roles **→** Web Server (IIS) **→** Next **→** Next **→** Application Development (All) **→** Next **→** Install **→** Close.

[Read for more details how to install IIS](http://technet.microsoft.com/en-us/library/ee692294(WS.10).aspx).

### Addition configuration of HPC web site.

1. Extract Web Site archive to UACluster2 directory.
2. Configure your web site.

Open file web.config in WebTaskManager directory and replace next in all document text:

* + 192.168.0.1 **→** your head node IP address (5 replacements)
  + administrator **→** your HPC cluster administrator logon name (2 replacements)
  + HPCDomain **→** your domain name for HPC Cluster (1 replacement)
  + P@ssw0rd **→** your HPC cluster administrator password (2 replacements)

1. Add Web Site in IIS Manager.

Start **→** Administrative tools **→** Internet Information Services (IIS) Manager **→** <Server name> **→** Sites **→** Add Web Site **→** Site name = "HPC"; Physical path = <Path to WebTaskManager directory>; Type = "http"; IP address = <head node IP address>; Port = "80"; Hostname = <Site domain name>; **→** OK.

# Usage

The Web Site needs users permissions to work.

After successfully authentication user receive access for jobs and files manipulation.

Site consist of five main tabs: Main, Tasks, Files, Statistics and FAQ.

## Main

Tab "Main" consist of information about cluster and cluster schedule.

## Tasks

Tab "Tasks" contains two primary functions:

* "List jobs" for listing and controlling existing HPC jobs "List jobs", where you can select custom columns for listing and cancel your jobs.
* "Add job" for creating and submitting new job, where you can configure your job and tasks similarly to "Add job" in HPC Job Manager.

## Files

Tab "Files" contains all abilities to upload new files and manage (Create, Cut, Copy, Paste, Rename, Delete, Save) files in your working directory. For doing same operation under files you have to check it firstly and then select needed operation.

## Statistics

Not works in current version.

## FAQ

Tab "FAQ" contains information for using Web Site.

After finishing working with HPC cluster you have to log out from site.