



Andrew Hoefling <andrew@hoeflingsoftware.com>

DNN Prompt and MS Powershell

5 messages

Peter Donker <peter@bring2mind.net>

Thu, Nov 2, 2017 at 11:13 AM

To: andrew@hoeflingsoftware.com, Daniel Mettler <Daniel.Mettler@2sic.com>, kford@dnndev.com, David Poindexter <dpoindexter@nvisionative.com>

Cc: Clint Patterson <Clint.Patterson@dnnsoftware.com>

Hi Andrew,

I'm reaching out to you following your start of a DNN Prompt/Powershell project here:

<https://github.com/ahoefling/dnn-powershell>

Back when Kelly first approached me with DNN Prompt we merged what I had in my head and what he'd already put to code together. Most of this is now part of DNN slated for version 9.2. But this is just one piece of a bigger puzzle some of us are trying to put together. And you guys are all on the same track.

The vision I originally had was the ability to "script" DNN (remotely). The idea was that someone could batch command various DNN installations to do common tasks (following numerous complaints I hear from people who need to patch their 50 DNN installations when a new security patch comes out).

Kelly came more from the "ease of use" perspective of a single installation making DNN more intuitively accessible to people who are comfortable with shells (and who isn't these days). But he also had in mind some scripting future for this.

In our initial discussions (and correct me if I'm wrong Kelly) we quickly came to the conclusion that building an entire scripting engine inside of DNN Prompt would open up Pandora's box and the complexity would quickly bog this down. Instead I've always felt that Powershell was the prime candidate to provide the scripting engine. All that was needed was a way to interact with Prompt.

Then there is one more piece in the larger puzzle: nvQuicksite. When talking about Prompt I involved David who had made an installer. David's installer focused on creating new DNN installs locally. But I'd love to see this being able to grow so it can (a) install remotely and (b) do more tricks to a DNN installation like installing modules. Basically nvQuicksite could grow into a graphic tool that sits on top of the Powershell capabilities.

So here we are in Nov 2017 and it looks like we'll have the definitive version of DNN Prompt in the core soon and we can begin to flesh this out. This is great. Now a couple of questions to Andrew and Daniel:

1. Does the vision outlined above correspond with what you guys were thinking as well? If not what use cases were we overlooking? Can both Andrew and Daniel elaborate on their ideas a little for this feature?
2. I'm guessing the initial idea Andrew had was for scripting ability locally (i.e. Powershell running on the same machine as the DNN site). Is that correct?
3. The biggest challenge for scripting remotely (which is where I'd ultimately like to go) is doing this securely. Opening a way to script control DNN remotely will not sit easy with some folks and until now I've not had a

favorable response from DNN Corp. But everything is up in the air right now and if we're enough I think we can see if we can make this happen.

Thanks,

Peter

Andrew Hoefling <andrew@hoeflingsoftware.com>

Thu, Nov 2, 2017 at 12:16 PM

To: Peter Donker <peter@bring2mind.net>

Cc: Daniel Mettler <Daniel.Mettler@2sic.com>, kford@dnndev.com, David Poindexter <dpoindexter@nvisionative.com>, Clint Patterson <Clint.Patterson@dnnsoftware.com>

Hello Peter,

Thanks for reaching out to me about this I think there is some great potential regarding scripting DNN websites. To answer your questions

1. I believe our visions are on the same page of what we can do with scripting. I want to be able to script DNN Clean Installations and Upgrade Paths 100% which will reduce DNN website management down to 1 click deploys and 1 click upgrades. This will bring DNN Website development in line with most modern build/dev/staging/production environment models.
2. The Minimal Viable Product (MVP) here should focus on getting everything working on the local machine. I know this isn't full feature and we all want remote shell access but it will be important to focus on this use case first. This eliminates security issues and a very large list of use cases we will need to test for security on the MVP release. Even though the MVP will be developed for a localhost shell, a good powershell scripter should be able to write a script that can remotely connect to the box and run the command. I believe the command 'Invoke-Command' allows you to specify a machine and credentials to run said command. While this is not ideal I believe it is a suitable workaround for the use case of upgrading 50+ DNN websites at once.

There are 2 big questions here that I don't have an answer to but I think merits discussion of how the CLI should work:

* **Should it work like 'git' and require the CLI to be somewhere in the file path of the DNN Website?** The idea here is the CLI will look for some type of configuration or manifest file (something that can be defined later) that determines if it is a DNN directory structure and then points the commands to execute against the DNN instance.

* **Should the CLI be able to interact with DNN anywhere on the box?** This idea is more complex, suppose there are 5 DNN Websites on the same machine. I could run a command that could list out all the DNN Instances and then chose one to connect to. Once connected I can then execute commands on it. While this is more complicated than the first option I think this has more business value to a CLI user

3. This is a very big concern for me as well but I don't think this will be a difficult problem to solve. PowerShell has remote command execution built into it and there are several existing modules out there already that support logging into remote systems securely. A good example of this is the Azure CLI, when a user attempts to execute a command on a resource it prompts them to login. A web browser pops up and requires them to use their Azure Credentials to login securely to Azure. At that point (I believe) a token is generated which is used as part of the communication between the server and the remote CLI.

A couple things to note with bullet 3

* The remote login could prompt a special login page that connects to the DNN Authentication system. Similar to the user experience mentioned above, when I try to execute a command a web browser pops up that looks like the DNN Auth page and the user then enters their credentials and a token is provided. If we go down this route we could create a Web API or WCF Service designed for working with the powershell module that has it's own

encryption algorithms to make sure all messages are secure. While it may be overkill this is stuff I have done before in banking software. We could fully encrypt the message before sending it over the wire and then decrypt it on the DNN Server side. Since security is a big concern it may be useful to use WCF since there are some advanced security features built into it.

* To dive a little bit deeper into the security problem mentioned in the last bullet Creating some kind of remote API regardless of tech, we could add a feature into the DNN website itself where remote CLI access can be enabled/disabled. This could be a feature that is disabled by default and once enabled the API is turned on and the shell can communicate with it. Another way to implement security is utilizing an API key that is either generated for each DNN instance (this becomes difficult to manage as a scripser) or built into the module. The API could then reject any commands that do not have the shell key as part of the header.

*** Remote shell connections is my end goal here because I want to fully script Continuous Integration/Continuous Deployment builds so I never have to deploy DNN manually again.**

Thanks!
-Andrew

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Peter Donker <peter@bring2mind.net>

Thu, Nov 2, 2017 at 4:26 PM

To: Andrew Hoefling <andrew@hoeflingssoftware.com>

Cc: Daniel Mettler <Daniel.Mettler@2sic.com>, kford@dnndev.com, David Poindexter <dpoindexter@nvisionative.com>, Clint Patterson <Clint.Patterson@dnnsoftware.com>

Hi Andrew,

Thanks for your elaborate response. This is more or less in line with my thinking. Let's see how we can get this rolling. Right now I'm not in a position to devote a lot of time to this, but I'd love to stay in the loop and see where I can help. Like you said: the first nut to crack is how your local PS will hook into DNN and whether this will be just the current dir or if it can peer beyond it. Like you said: most CLI users will want to ultimately reach all their local DNN sites using this technology.

Just for background info: I've made my own PS commands before, so I have a little bit of background. I use a dll in which I've rolled a bunch of common functions for my DNN stuff. PS scripting itself I find more daunting as I'm not a huge fan of the language. But hey, nothing we can't learn.

Best,

Peter

From: Andrew Hoefling [<mailto:andrew@hoeflingssoftware.com>]

Sent: 02 November 2017 17:17

To: Peter Donker <peter@bring2mind.net>

Cc: Daniel Mettler <Daniel.Mettler@2sic.com>; kford@dnndev.com; David Poindexter <dpoindester@nvisionative.com>;
Clint Patterson <Clint.Patterson@dnnssoftware.com>
Subject: Re: DNN Prompt and MS Powershell

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Andrew Hoefling <andrew@hoeflingssoftware.com>

Thu, Nov 2, 2017 at 4:42 PM

To: Peter Donker <peter@bring2mind.net>

Cc: Clint Patterson <Clint.Patterson@dnnssoftware.com>, Daniel Mettler <Daniel.Mettler@2sic.com>, David Poindexter <dpoindester@nvisionative.com>, kford@dnndev.com

Hey Peter,

This is all great to hear! I'm not looking to develop this today or next week. Right now the time commitment is just specing our all the MVP features.

I'm going to take our discussion to github. I think it is important to have these discussions out in the open so others in the community can get involved.

From here I can set up a few meetings with the interested parties so we can discuss requirements.

I'm really excited to talk with everyone more about this

Thanks!!

-Andrew

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Clint Patterson <Clint.Patterson@dnnssoftware.com>

Thu, Nov 2, 2017 at 4:51 PM

To: Andrew Hoefling <andrew@hoeflingssoftware.com>, Peter Donker <peter@bring2mind.net>

Cc: Daniel Mettler <Daniel.Mettler@2sic.com>, David Poindexter <dpoindester@nvisionative.com>, "kford@dnndev.com" <kford@dnndev.com>

Community FTW!

Awesome stuff guys... let's keep things moving forward. Really excited to see where this goes.

And you know we will help promote via social, DNN Digest, etc as much as possible.

Regards,

Clint Patterson

Ecosystem Manager, DNN Software

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From: Andrew Hoefling [<mailto:andrew@hoeflingssoftware.com>]

Sent: Thursday, November 2, 2017 4:42 PM

To: Peter Donker <peter@bring2mind.net>

Cc: Clint Patterson <Clint.Patterson@dnnssoftware.com>; Daniel Mettler <Daniel.Mettler@2sic.com>; David Poindexter <dpoindester@nvisionative.com>; kford@dnndev.com

11/2/2017

Hoefling Software Mail - DNN Prompt and MS Powershell

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