

SPICE WORLD 2022

HYBRID







Unlocking the Power of Regular Expressions with PowerShell

https://github.com/jdhitsolutions/SpiceWorld2022-PSRegex-Intro







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What is a Regular Expression?

- A way of describing data (text)
- Based on a set of accepted and standardized patterns
- Introduced in 1951
 - Incorporated into Unix
 - Led to grep
 - "Global search for Regular Expressions and Print lines"
- PowerShell supports the full regular expression library from .NET







- Validating data
- Finding data
- Fixing data
 - Splitting
 - Replacing





- (202) 867-5309
- 192.168.2.3
- \\server01\public









- \(\d{3}\)\s\d{3}-\d{4}
- (\d{1,3}\.){3}\d{1,3}
- \\\\\W+\\\W+



Regular Expressions are Classy

Pattern	Match
\w	Any word character, including numbers and the underscore (_)
\d	Any digit
\D	Any non-digit
\s	Any whitespace
\W	Any non-word character
\ S	Any non-whitespace

Case-Sensitive



With Qualifiers

Qualifier	Description
*	Match 0 or more of the preceding pattern
+	Match 1 or more of the preceding pattern
?	Match 0 or 1 instance of the preceding pattern
{n}	Match exactly N number of the preceding pattern
{n,m}	Match at least N number of the preceding pattern and no more than M number
{n,}	Match at least N number of the preceding pattern



Special Characters

Character	Description
•	Any single character
[xyz]	Match at least one of the characters in the brackets
[a-zA-Z]	Match at least one of the characters in the range. Case sensitive.
[^xyz]	Match any character except what is in brackets
^	Match the beginning characters
\$	Match the ending characters
\	The regular expression escape character





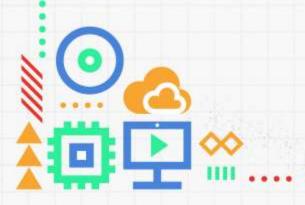
Escape Clause

- You'll need to escape regular expression characters if you need to match them
 - []<>?^\$
- \
- [2022-12-22] Some data goes here
 - \[[\d-]+\]
 - Match on the literal [
 - \[
 - Match on a digit or the dash
 - [\d-]
 - Match on the literal]
 - \]
 - Match: [2022-12-22]



Show Me

https://github.com/jdhitsolutions/SpiceWorld2022-PSRegex-Intro









- Regular Expression "Gotchas"
- Comparisons are True/False
- Watch the float
 - How exact do you need to be?
- Test for known failures
- You still might need to validate
- You have to know your data
 - It should be predictable
 - It should be consistent



Advanced Stuff

- Look ahead and look behind
 - $(? <= \d\s) \w+\.\w+$
 - 35 foo.bar
 - foo.bar
- Optional matches
 - ^\d{3}(\-[a-z]+)?\$
 - 432
 - 678-xyj
- Regex Options
 - Configuring case
 - Multiline search
 - Ignore pattern whitespace





- More with the [regex] type accelerator
 - [regex] *\rm \([a-z] \{1}\.\w\{2,7}\) @company.com \(\) "
 - \$rx.ismatch("f.bar@company.com")
 - True
 - \$rx.match("f.bar@company.com")

Groups : {0}

Success : True

Name : 0

Captures : {0}

Index : 0

Length: 17

Value : f.bar@company.com

ValueSpan:





Resources

Help about_regular_expressions
Help about_comparison_operators
Help about_wildcards





Resources

https://www.regular-expressions.info

https://regexlib.com

https://rubular.com

https://regex101.com

https://pluralsight.pxf.io/psregex





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Thank you.



