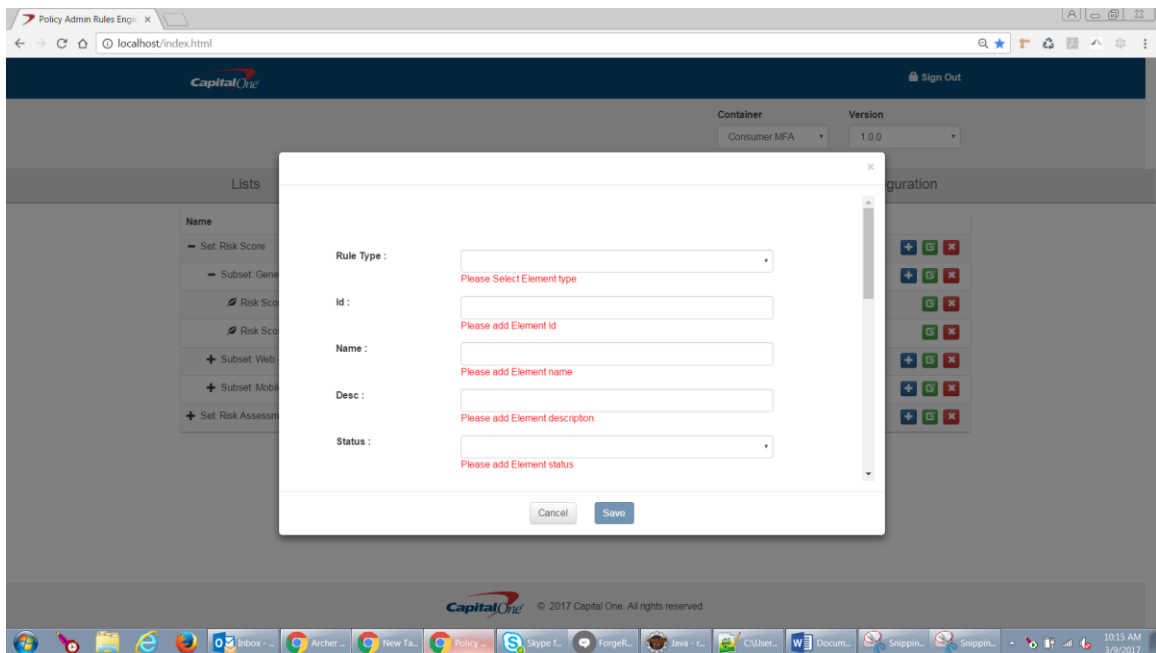
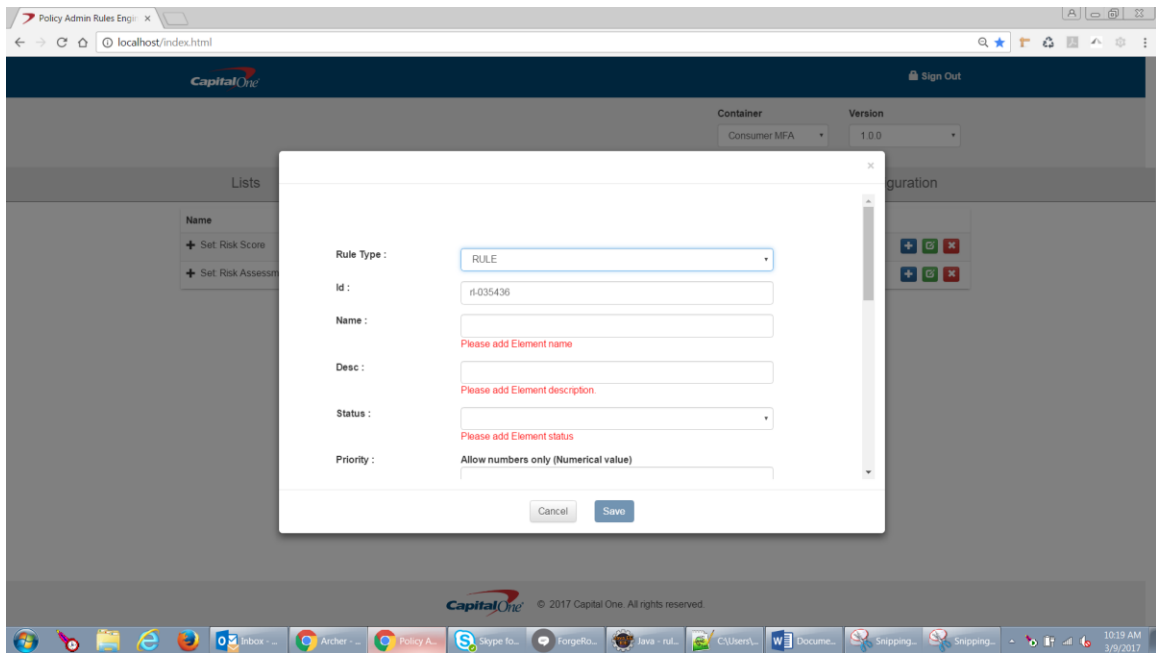


Rules TAB

The screenshot displays the Capital One Policy Admin Rules Engine interface. The browser address bar shows 'localhost/index.html'. The interface has a dark blue header with the Capital One logo and a 'Sign Out' link. Below the header, there are tabs for 'Lists', 'Rules' (which is selected), 'Attributes', 'Operators', 'Rules Type', and 'Configuration'. The 'Rules' tab contains a table with the following data:

Name	Id	Priority	ElementType
Set Risk Score	rs-rscore	10	RULE_SET
Subset: Generic Risk Score	ss-rscore-generic	10	RULE_SUB_SET
Risk Score: High Risk Country	ri-rscore-hr-country	10	RULE
Risk Score: Hosting Provider	ri-rscore-ap-hp	20	RULE
Subset Web - Risk Score	ss-rscore-web	20	RULE_SUB_SET
Subset Mobile - Risk Score	ss-rscore-mobile	30	RULE_SUB_SET
Set Risk Assessment	rs-rassess	20	RULE_SET

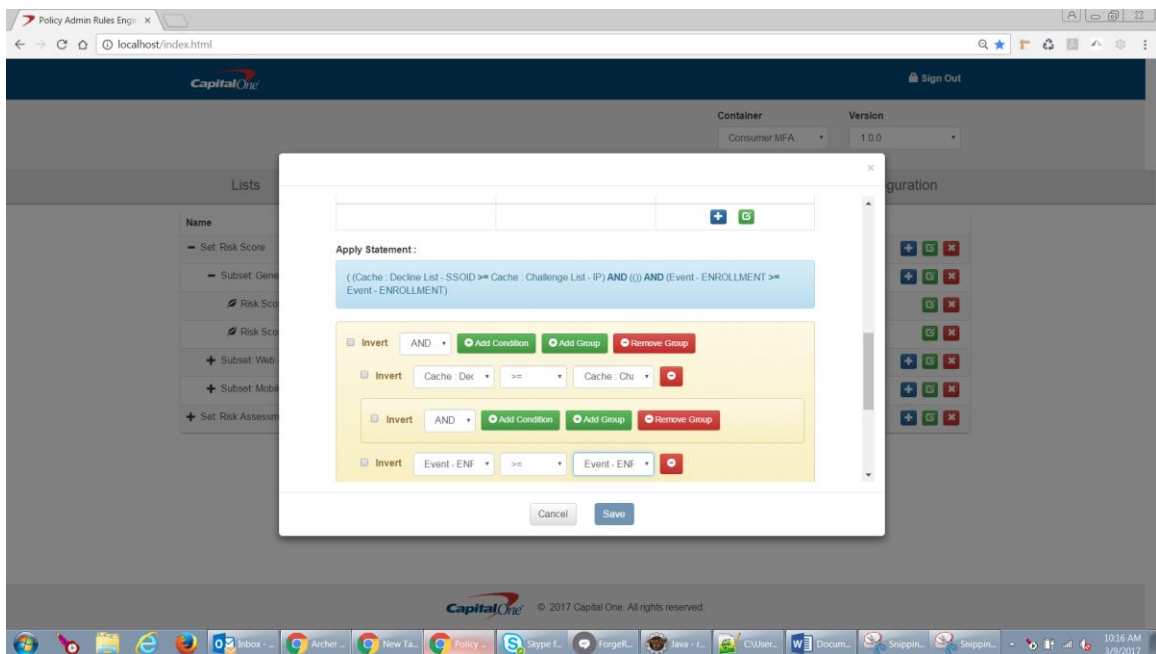
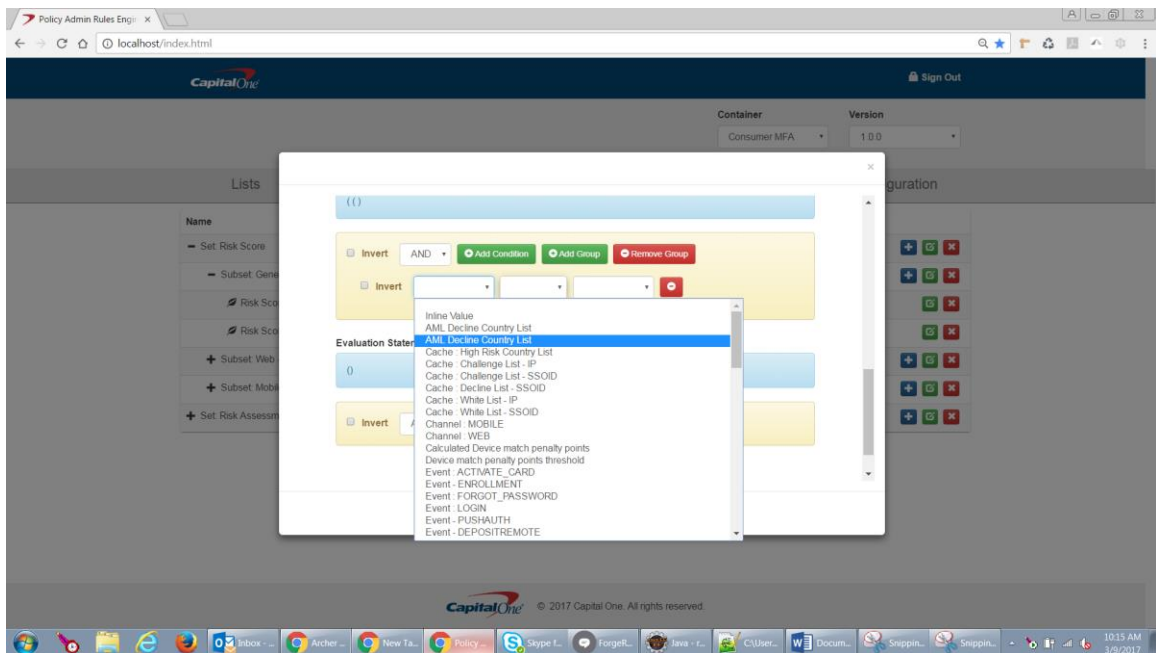
At the bottom of the interface, there is a footer with the Capital One logo and the text '© 2017 Capital One. All rights reserved.' The Windows taskbar at the very bottom shows several open applications, including Outlook, Chrome, and Skype.



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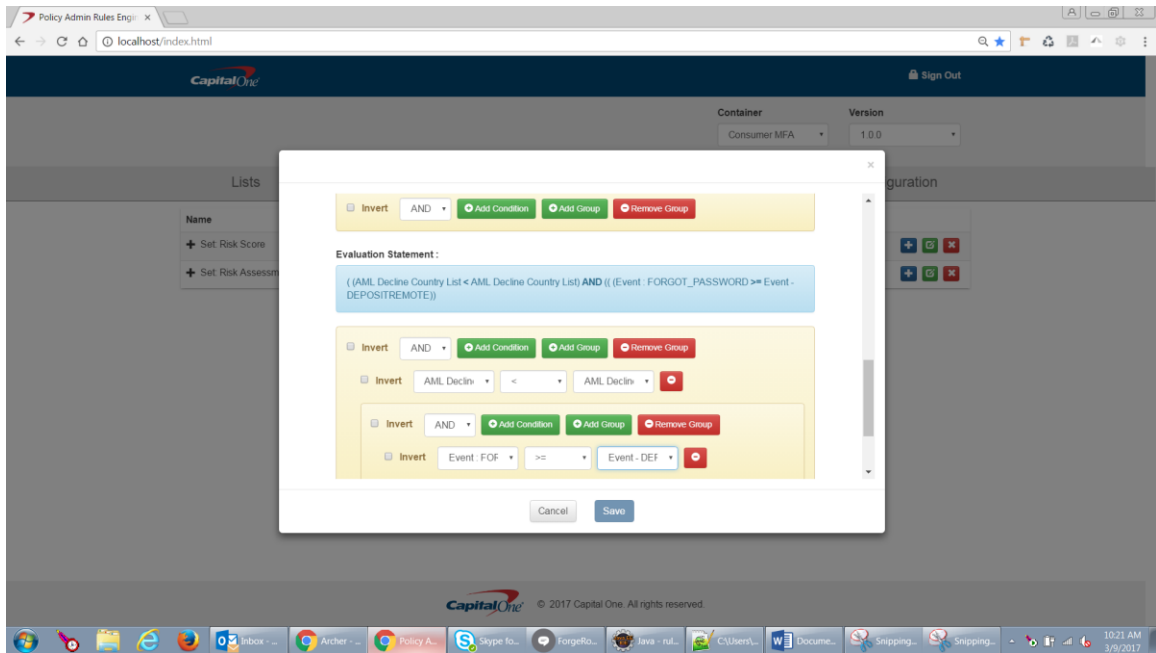
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DATA List Tab

The screenshot shows the 'Policy Admin Rules Engine' interface. The 'Lists' tab is selected, displaying a table of records. The table has columns for 'Records ID' and 'Delete'. The 'Manage' dropdown menu is open, showing options for 'Add Records' and 'Delete Records'.

Records ID	Delete
204.45.246.208	
204.45.246.227	
204.45.246.34	
204.45.98.14	
204.45.98.62	
208.53.157.216	
208.53.157.231	
208.53.159.71	
50.7.63.85	
64.125.98.6	
216.155.127.98	

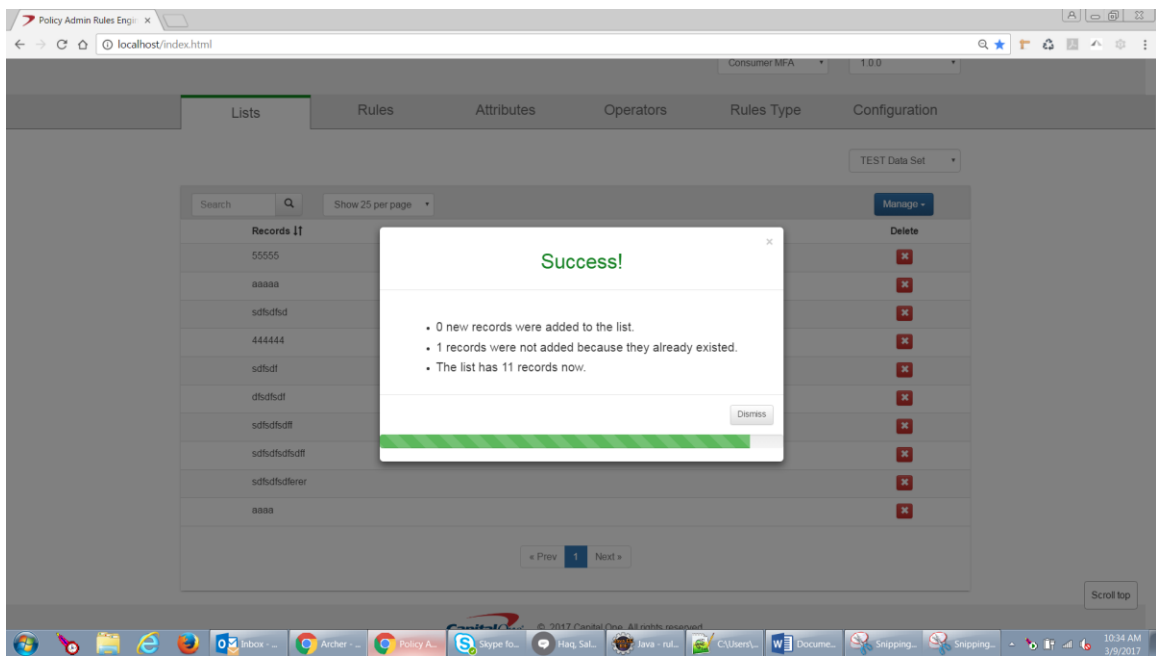
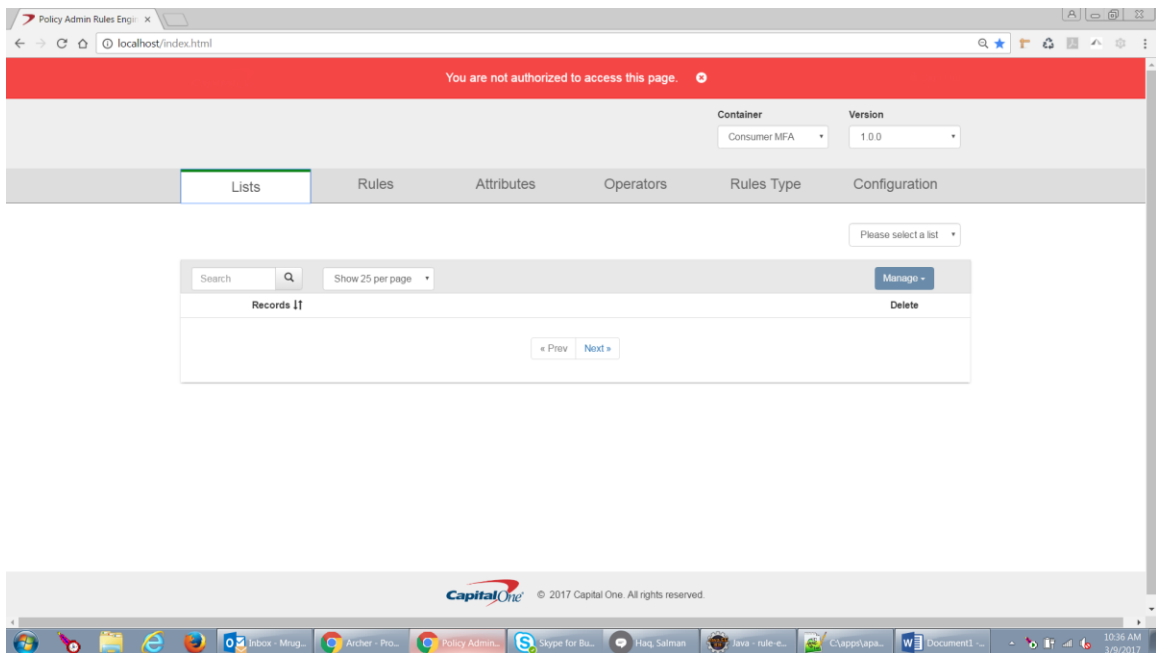
The screenshot shows the 'Policy Admin Rules Engine' interface. The 'Lists' tab is selected, displaying a table of records. The table has columns for 'Records ID' and 'Delete'. The 'Manage' dropdown menu is open, showing options for 'Add Records' and 'Delete Records'.

Records ID	Delete
204.45.246.208	
204.45.246.227	
204.45.246.34	
204.45.98.14	
204.45.98.62	
208.53.157.216	
208.53.157.231	
208.53.159.71	
50.7.63.85	
64.125.98.6	
216.155.127.98	

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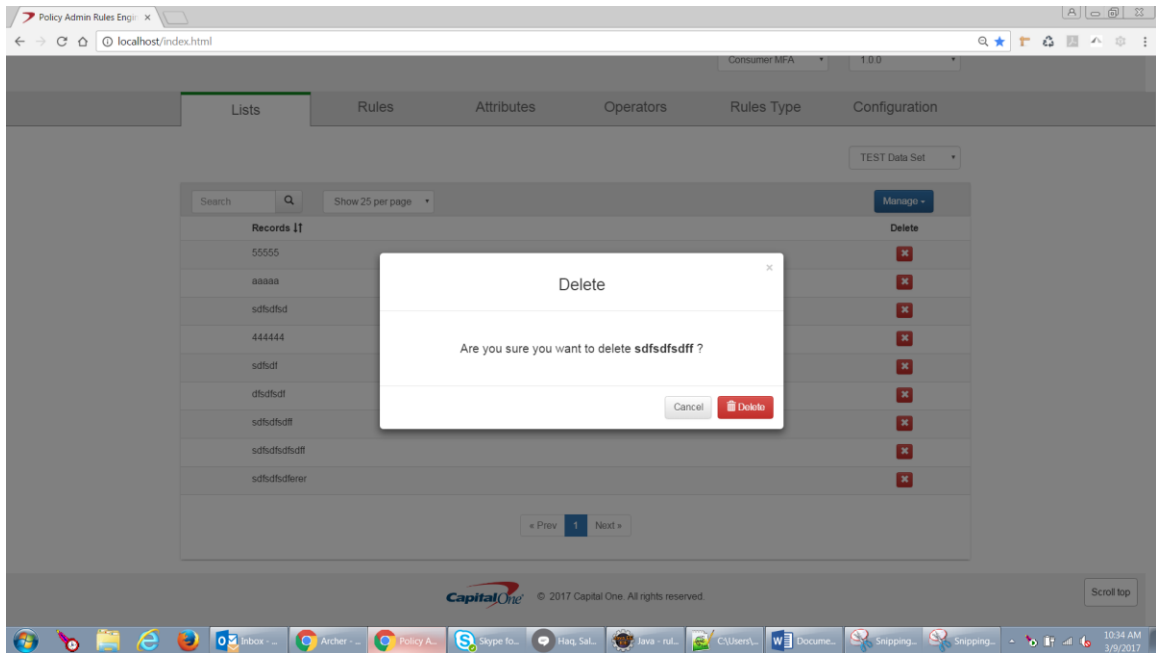
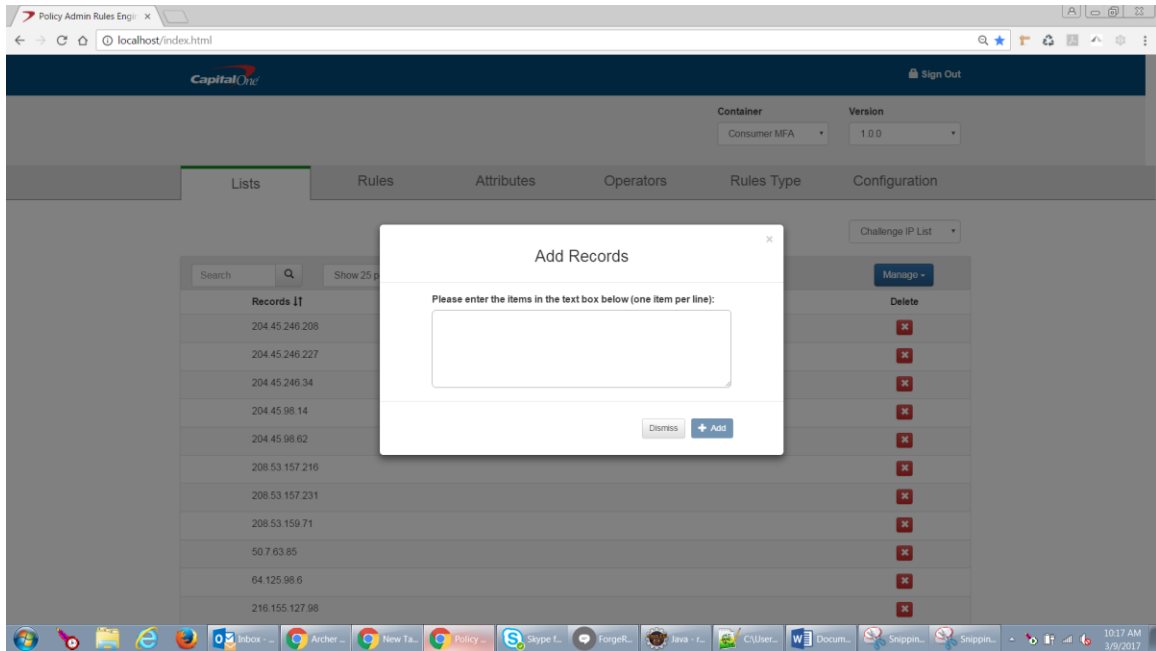
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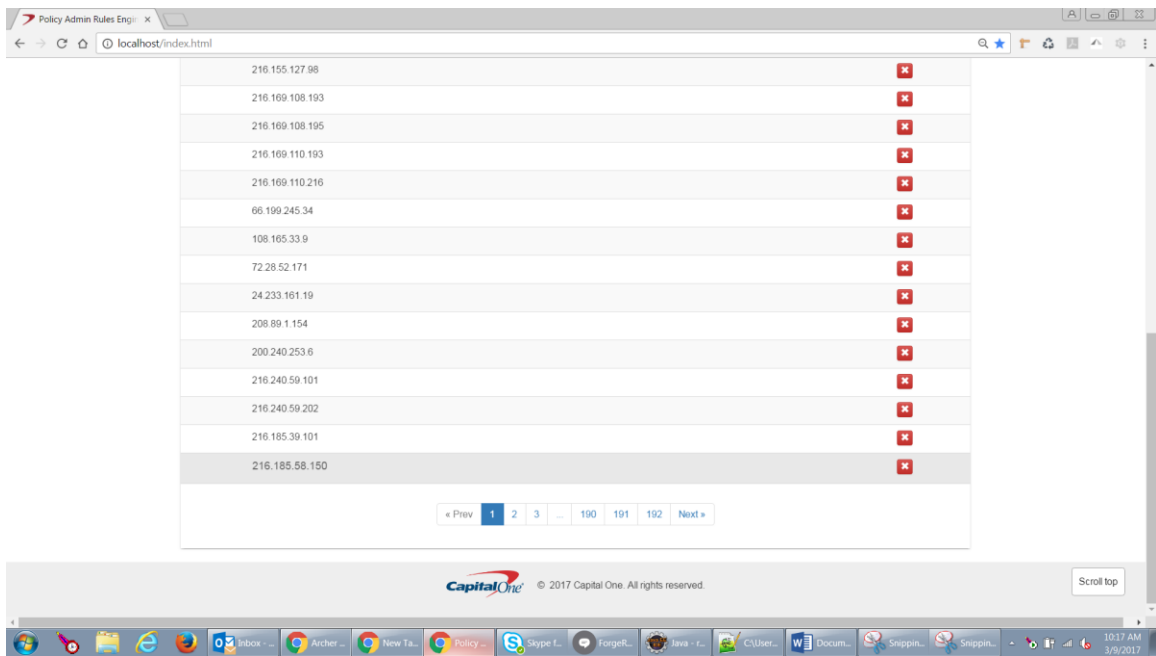
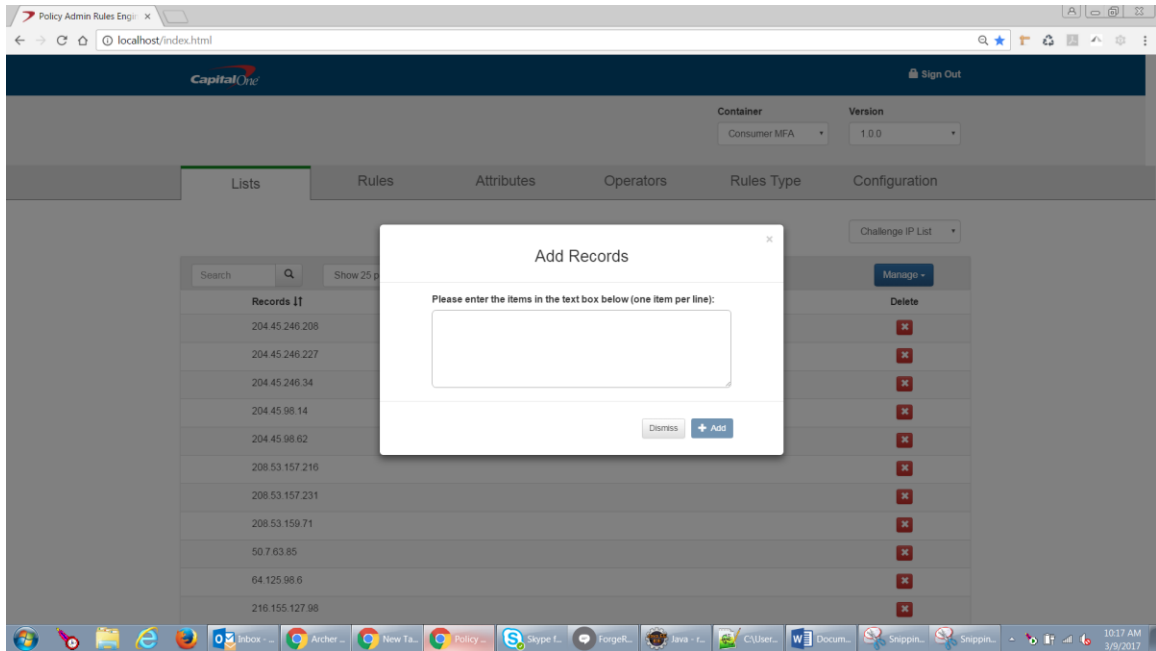
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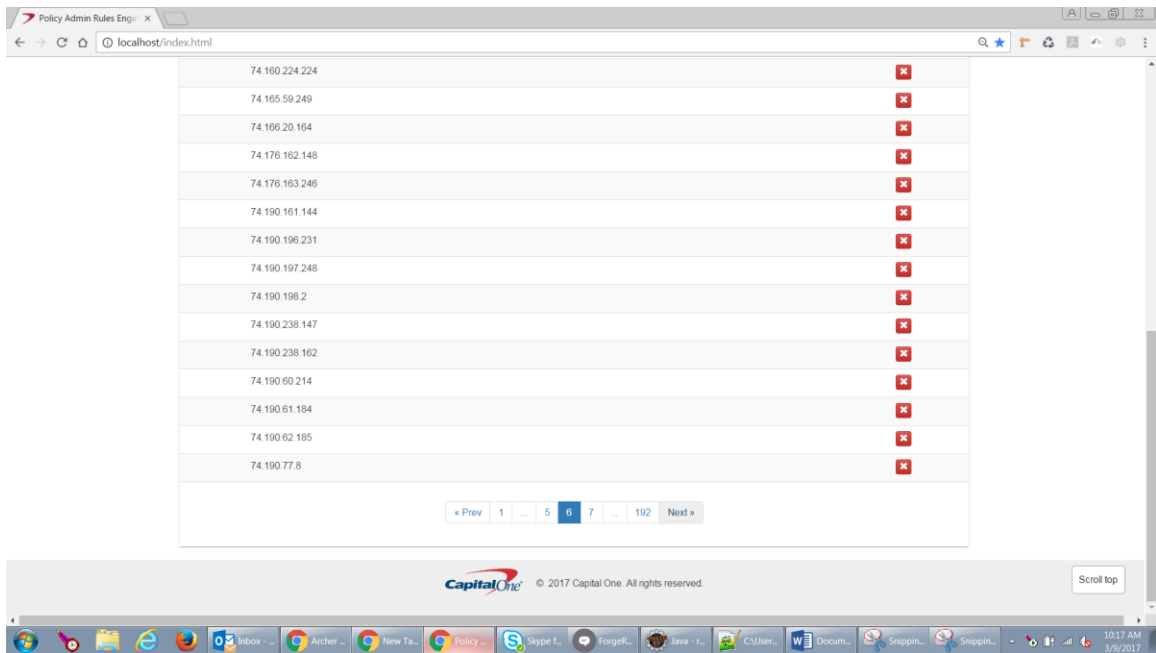
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Attribute TAB

The screenshot displays the Capital One Policy Admin Rules Engine interface. A modal window is open for configuring an attribute. The modal contains the following fields and sections:

- Expression:** `DN:c1id=decline-ssoid-list,ou=data,c1id=mfa-cons,ou=...`
- Display Format:** `DeclineList`
- Value:** (Empty field with a red error message: "Please add attribute value")
- Loggable:** ☐
- Properties:** A table with columns Key and Value.

Key	Value	
attributeDataReaderSpringName	ldapMultiValueAttributeDataReader	✖
ldapAttributeName	c1Data	✖
		+ ✖

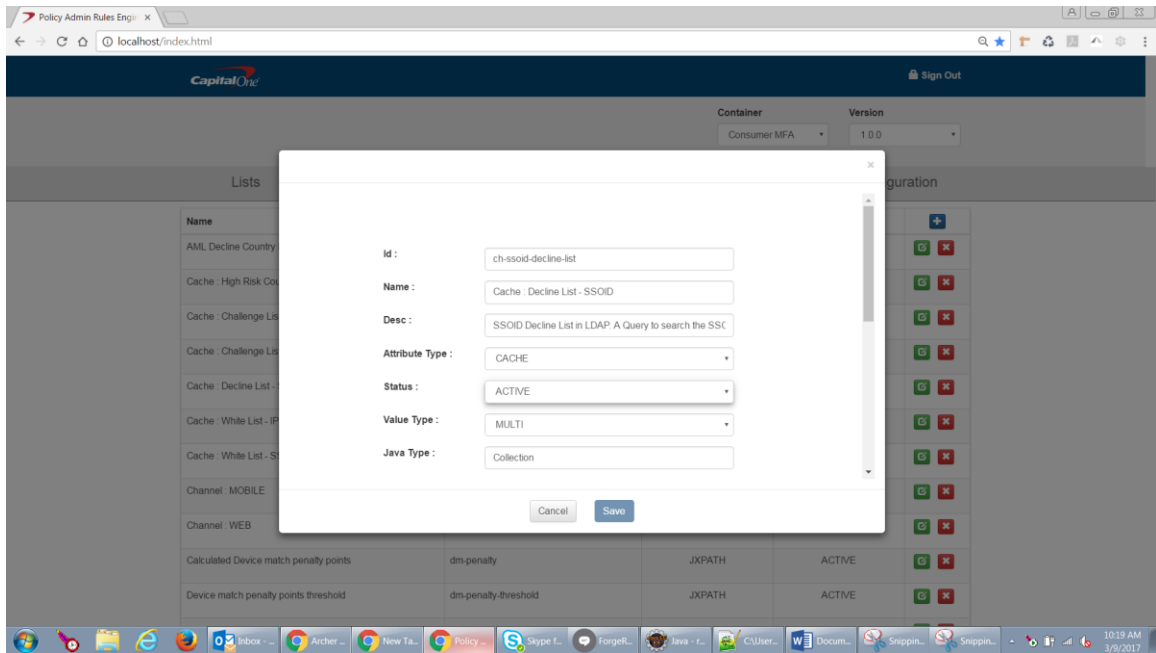
Below the modal, the main interface shows a table of attributes. The table has columns: Name, Id, Attribute Type, Status, and a set of icons (plus, minus, refresh, delete).

Name	Id	Attribute Type	Status	
AML Decline Country List	aml-decline-country-list_draft	STATIC	ACTIVE	✖ ✖
Cache : High Risk Country List	ch-high-risk-country-list	CACHE	ACTIVE	✖ ✖
Cache : Challenge List - IP	ch-ip-challenge-list	CACHE	ACTIVE	✖ ✖
Cache : Challenge List - SSOID	ch-ssoid-challenge-list	CACHE	ACTIVE	✖ ✖
Cache : Decline List - SSOID	ch-ssoid-decline-list	CACHE	ACTIVE	✖ ✖
Cache : White List - IP	ch-white-ip-list	CACHE	ACTIVE	✖ ✖
Cache : White List - SSOID	ch-white-ssoid-list	CACHE	ACTIVE	✖ ✖
Channel : MOBILE	channel-mobile	STATIC	ACTIVE	✖ ✖
Channel : WEB	channel-web	STATIC	ACTIVE	✖ ✖
Calculated Device match penalty points	dm-penalty	JXPath	ACTIVE	✖ ✖
Device match penalty points threshold	dm-penalty-threshold	JXPath	ACTIVE	✖ ✖

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Operator TAB





















Policy Admin Rules Engine X

localhost/index.html

Capital One Sign Out

Container: Consumer MFA Version: 1.0.0

Lists Rules Attributes **Operators** Rules Type Configuration

Name	Id	Symbol	Status	
Collection contains given object operator	op-collection-contains	contains	ACTIVE	 
Decimal equals operator	op-decimal-eq	==	ACTIVE	 
Decimal greater than operator	op-decimal-gt	>	ACTIVE	 
Decimal greater than or equal operator	op-decimal-gt-or-eq	>=	ACTIVE	 
Decimal less than operator	op-decimal-lt	<	ACTIVE	 
Decimal less than or equal operator	op-decimal-lt-or-eq	<=	ACTIVE	 
Ldap Name exist operator	op-ldap-name-exist	exist	ACTIVE	 
Null or Empty check operator	op-null-empty-check	null	ACTIVE	 
String equals operator	op-string-eq	==	ACTIVE	 
String equals ignore case operator	op-string-eq-ic_draft	=	ACTIVE	 

10:21 AM 3/9/2017

Policy Admin Rules Engine X

localhost/index.html

Capital One Sign Out

Container: Consumer MFA Version: 1.0.0

Lists Rules Attributes Operators Rules Type Configuration

Id : op-decimal-lt-or-eq

Name : Decimal less than or equal operator

Desc : This operator does the Decimal less than or equal open

Symbol : <=

Status : ACTIVE

Class Name : com.capitalone.dsd.rule.operator.DecimalLessThanOrEq

Spring Name : decimalLessThanOrEqualOperator

Cancel Save

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10:18 AM 3/9/2017

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Rules Type TAB

The screenshot shows the Capital One Policy Admin Rules Engine interface. The 'Rules Type' tab is selected, displaying a table with the following data:

Name	Id	Description	Status
Score	rt-score	This is a Score rule set type, which increases t...	ACTIVE
Status, Stop on Success	rt-status	This is a Status rule set type, which returns the ...	ACTIVE

The interface includes a 'Sign Out' button in the top right corner and a 'Container' dropdown menu set to 'Consumer MFA'. The version is '1.0.0'. The bottom of the screen shows a Windows taskbar with various application icons and the system clock indicating 10:21 AM on 3/9/2017.

The screenshot shows the Capital One Policy Admin Rules Engine interface with the 'Add New Rule Type' dialog box open. The dialog box contains the following fields and options:

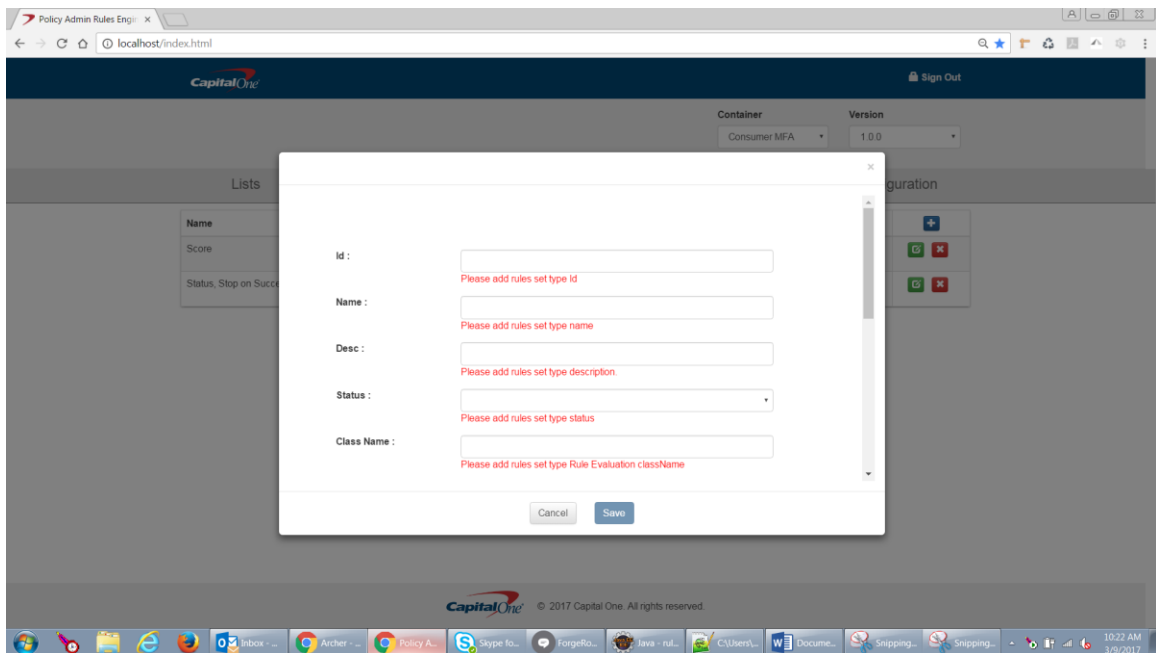
- Id :** rt-status
- Name :** Status, Stop on Success
- Desc :** This is a Status rule set type, which returns the status back if rule is pas
- Status :** ACTIVE
- Class Name :** com.capitalone.dsd.rule.evaluate.action.StatusRuleEvaluationAction
- Spring Name :** statusRuleEvaluationAction
- stop Rule Evaluation On Success :** ☒

The dialog box has 'Cancel' and 'Save' buttons at the bottom. The background interface shows the 'Rules Type' tab with the same table as in the previous screenshot. The bottom of the screen shows a Windows taskbar with various application icons and the system clock indicating 10:22 AM on 3/9/2017.

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Configuration TAB

Policy Admin Rules Engine X

localhost/index.html

Sign Out

Container: Consumer MFA Version: 1.0.0

Lists Rules Attributes Operators Rules Type **Configuration**









Id: re-config_draft

Name: Rule Engine Configuration

Description: This is a Rule Engine Configuration.

Status: ACTIVE

Properties:

Key	Value	Edit Delete
log.attributes.base	r-channel,r-event,r-pld,r-csid,r-fid,r-admin	 
log.attributes.rule-engine	r-pld,r-dvid,r-ft-dvid,r-dv-cookie,r-ip,r-ip-isp,r-ip...	 
log.level.sub-set	ALL	 
log.logger.name	am-risk-rules-log	 

Cancel Save

Policy Admin Rules Engine X

localhost/index.html

Container: Consumer MFA Version: 1.0.0

Lists Rules Attributes Operators Rules Type **Configuration**









Id: re-config_draft

Name: Rule Engine Configuration

Description: This is a Rule Engine Configuration.

Status: ACTIVE

Properties:

Key	Value	Edit Delete
log.attributes.base	r-channel	 
log.attributes.rule-engine	r-pld,r-dvid,r-ft-dvid,r-dv-cookie,r-ip,r-ip-isp,r-ip...	 
log.level.sub-set	ALL	 
log.logger.name	am-risk-rules-log	 

Cancel Save

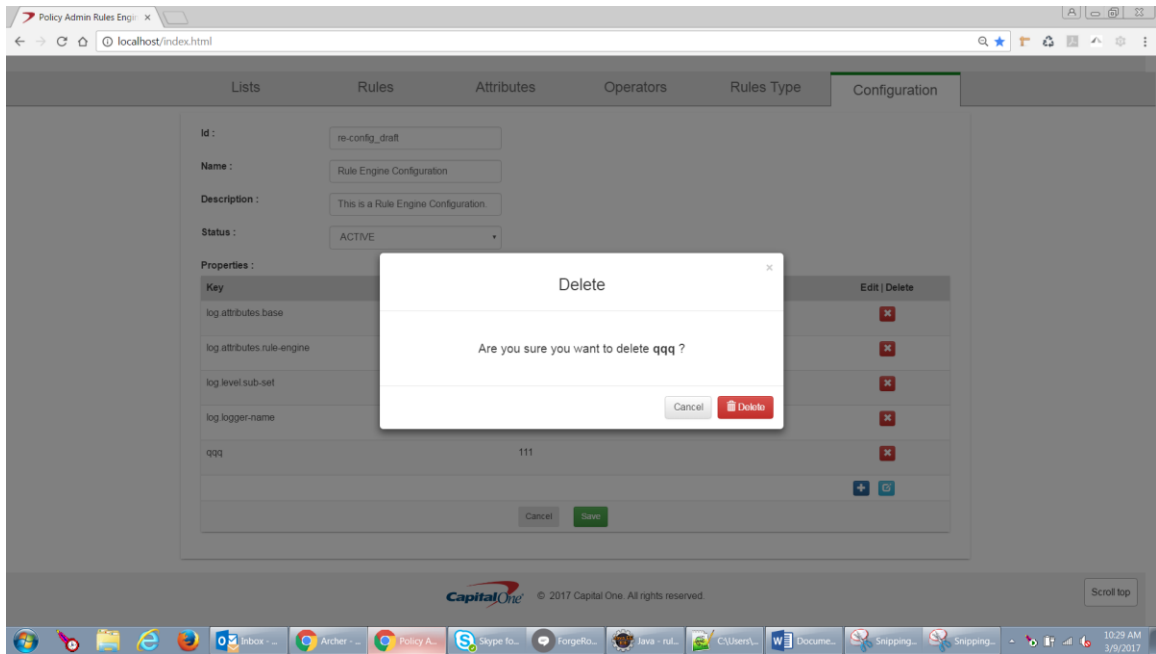
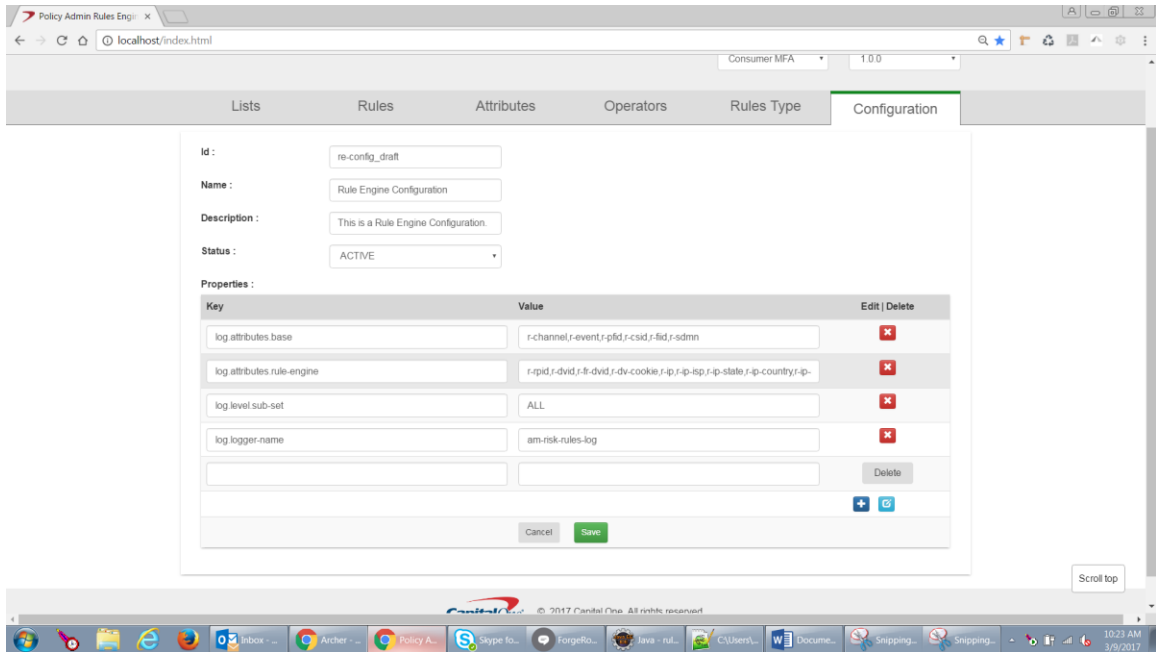
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Scroll top

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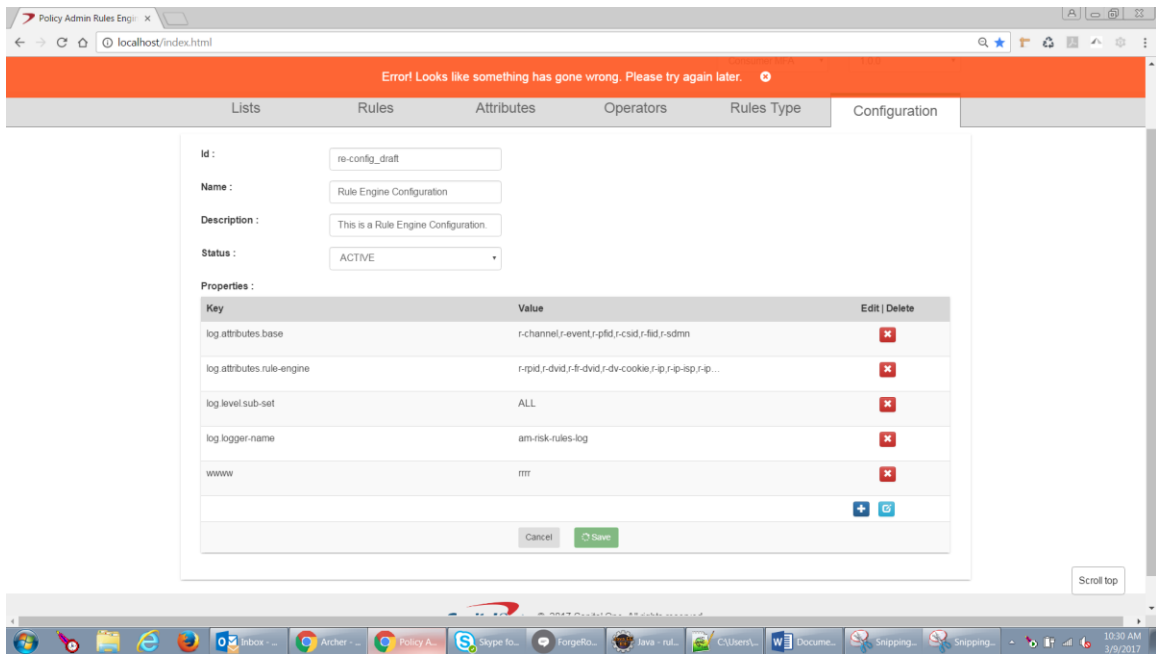
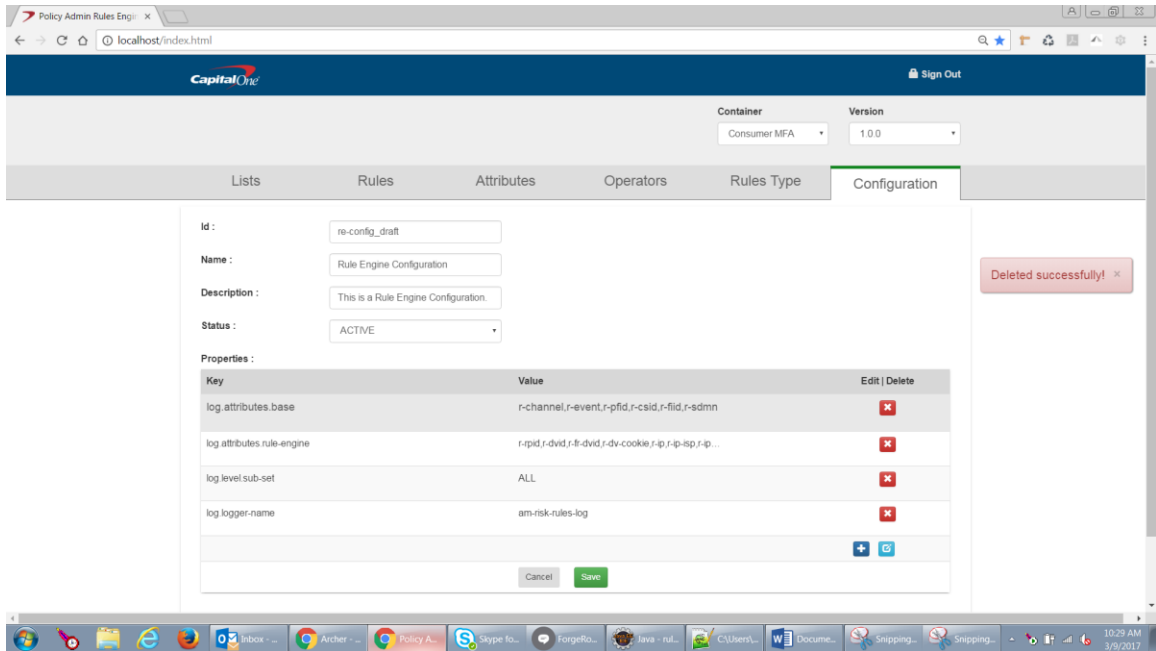
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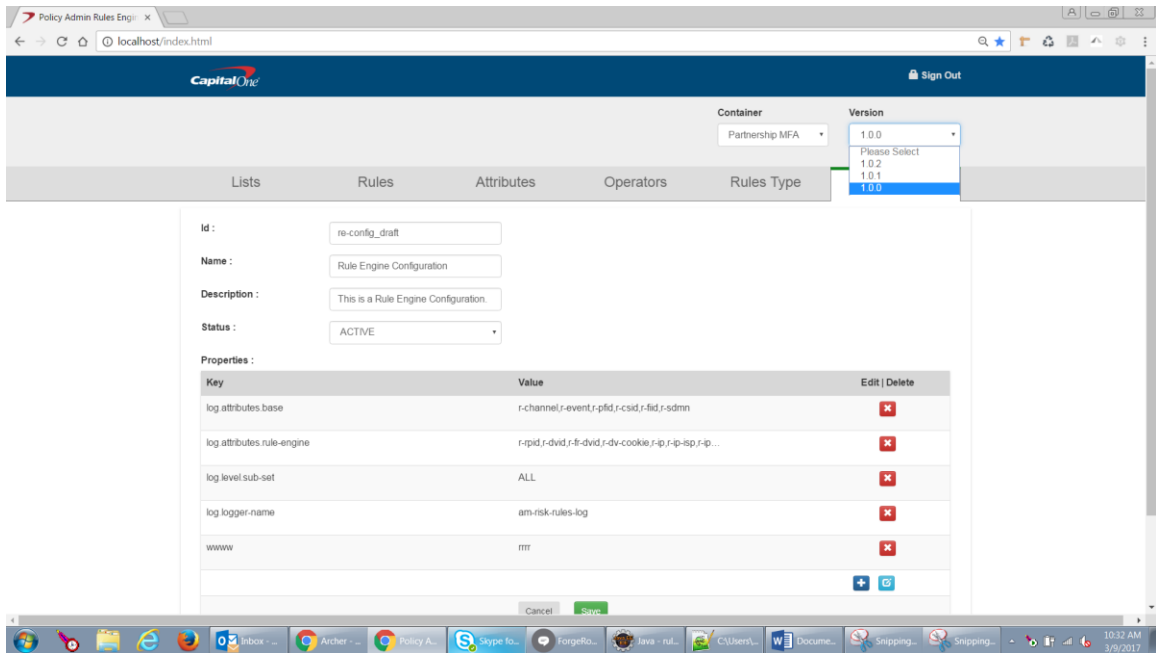
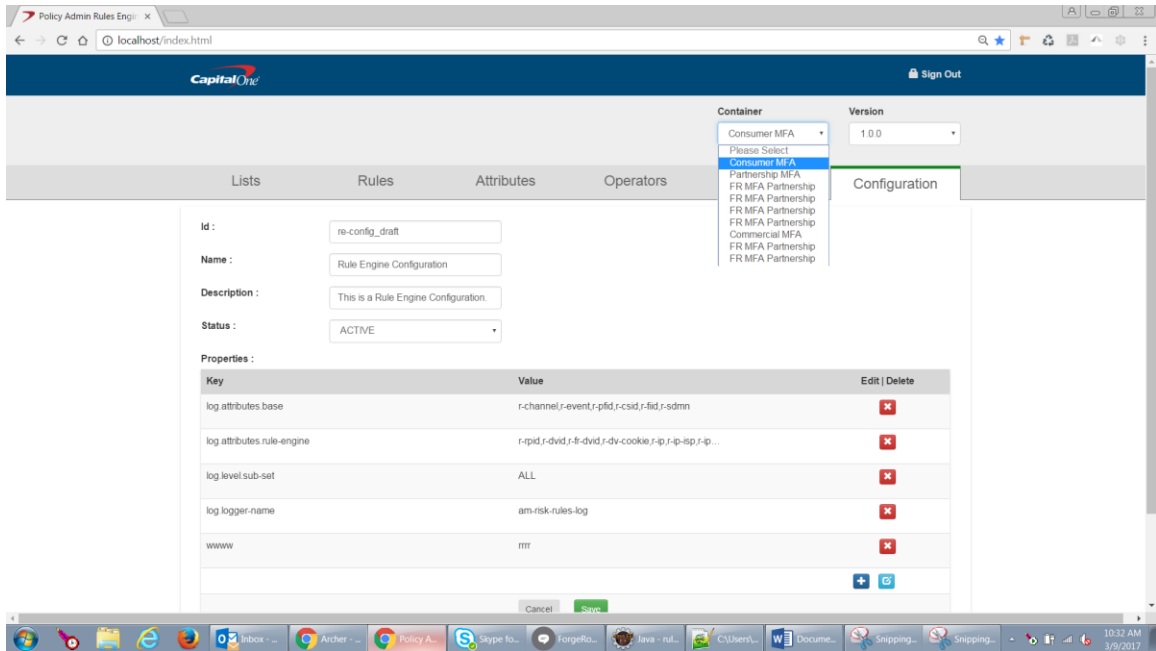
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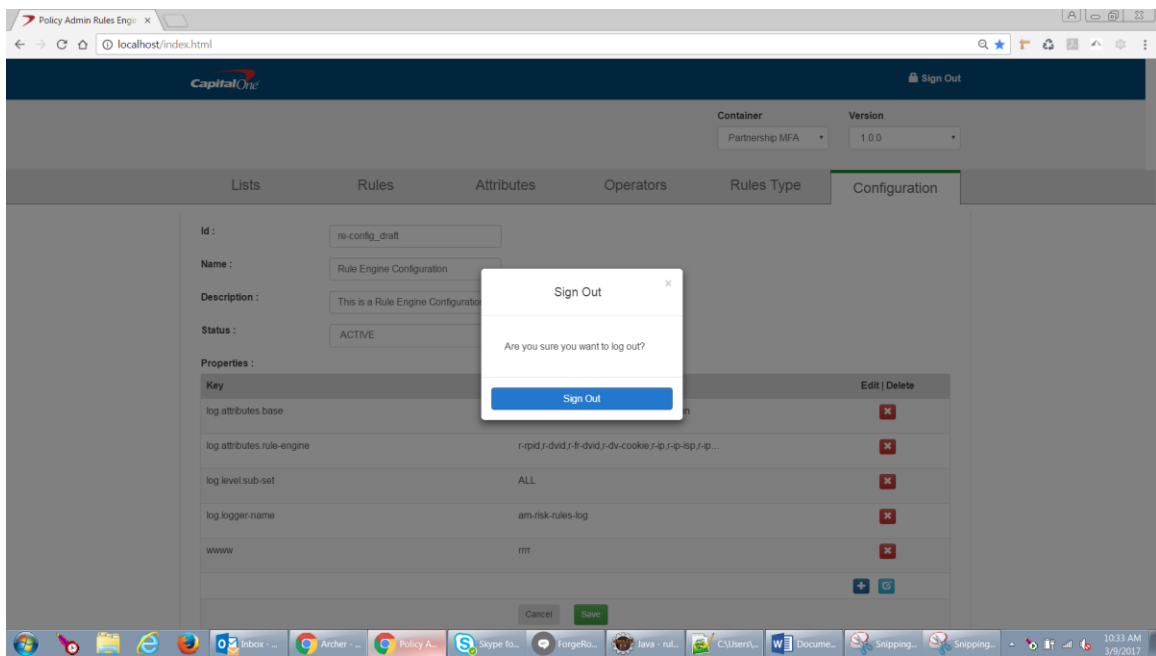
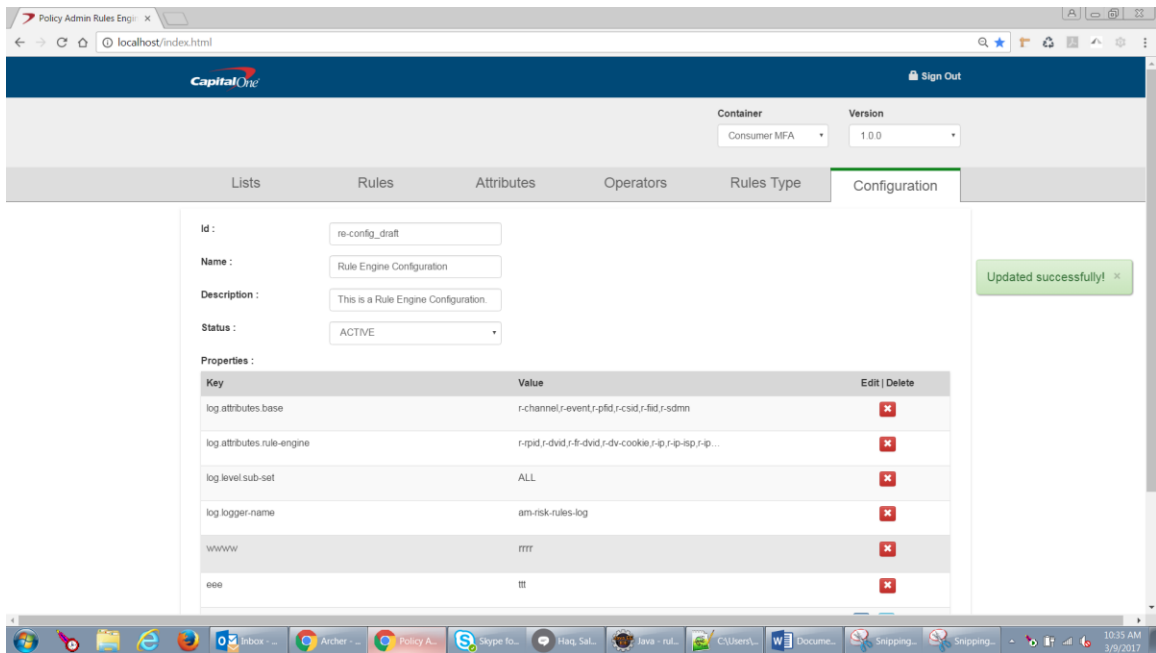
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