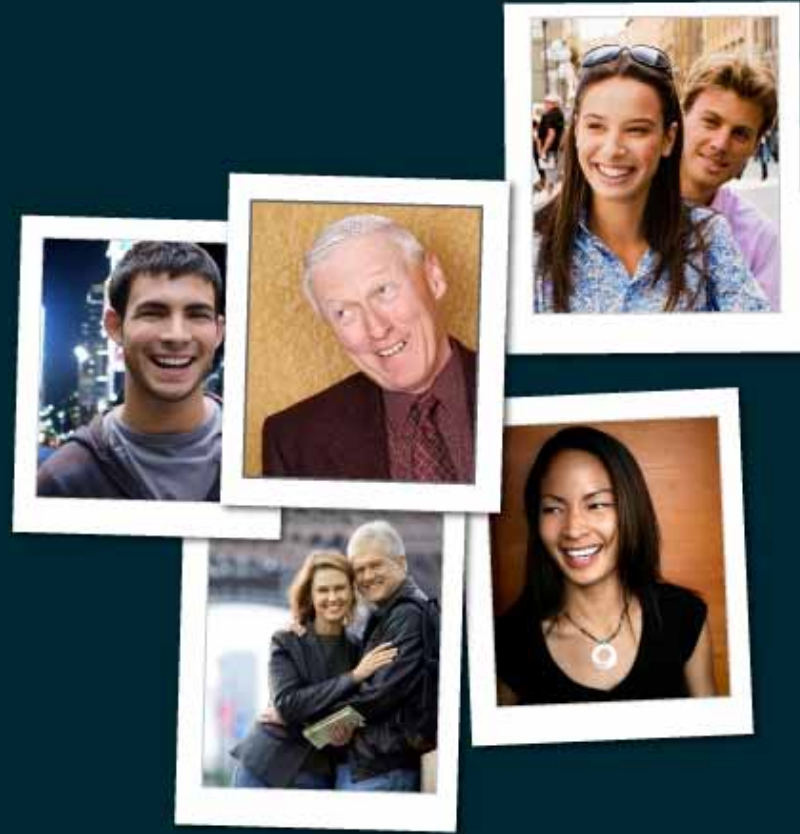


SUMMIT 08



ADVANCED BUSINESS RULES

Kenny Tietz
Tier 2 Technical Support

**RIGHT
NOW.**

- Types of rules
- What to use rules for?
- Operators
- Contains vs. Matches Regular Expressions
- Administration
- Escalations
- Troubleshooting
 - Rule Log vs. Transactions
- Best Practices
- Examples Throughout

- Incident
- Answer
- Contact
- Organization
- Opportunity
- Task

- Automate manual tasks
- Manage parts of your site:
 - Queue routing
 - Assignment
 - Email standard content to end-user
 - Escalation
 - Notification
 - Set/increment custom fields
 - Email surveys/marketing mailings to contacts
 - Create and assign SLAs/SLA instances
 - Manage Tasks

- Available for all data types
 - Is Modified
 - Is NULL
- Integer, date, and date/time data types
 - In Range
 - Can use relative times for some fields
- Converse operators available

CONDITION OPERATOR EXAMPLE

If

- 1 Incident.Created in range 08:00 05:00 Delete Condition
- 2 Incident.Date Problem Started in range
- 24 Hours
 relative Incident.Created
through
- 48 Hours
 relative Incident.Created
- 3 Incident.Status modified this edit Delete Condition
- 4 Incident.Order Number is not null Delete Condition

Add condition based on:

Logical Expression (& = and, | = or, e.g. 1 & (2 | 3))

1 & 2 & 3 & 4

- Action Operators
 - Increment/Decrement
 - Integer, date, and date/time data types
 - Equal to the value of
 - All data types supported by the feature.
 - Permits setting equal to the current value of another field (same type)
 - Append/Prepend
 - Text data types only
 - Use of quotes to add spaces between appended/prepended text

ACTION OPERATOR EXAMPLE

If

1 Incident.Order Number does not match regular expression IN_PROGRESS_*

Add condition based on:

Then

1 Set Custom Field Scheduled Call Time

equals 5:00

2 Set Custom Field Contact Time

decrement by + 1 Hours

3 Set Custom Field Purchase Date

equal to the value of Incident.Created

4 Set Custom Field Order Number

prepend with IN_PROGRESS_

Add Action

- Comparison based on some relative time offset
 - In range
- In range also supports the relative times
 - 6 hours before flight time custom field
- Not available for all fields
 - Custom field value
 - Rule variable value
- Absolute dates are still supported

RELATIVE TIME OPERATORS

If

1 Incident.Created in range 08:00 05:00 Delete Condition

2 Incident.Date Problem Started in range Delete Condition

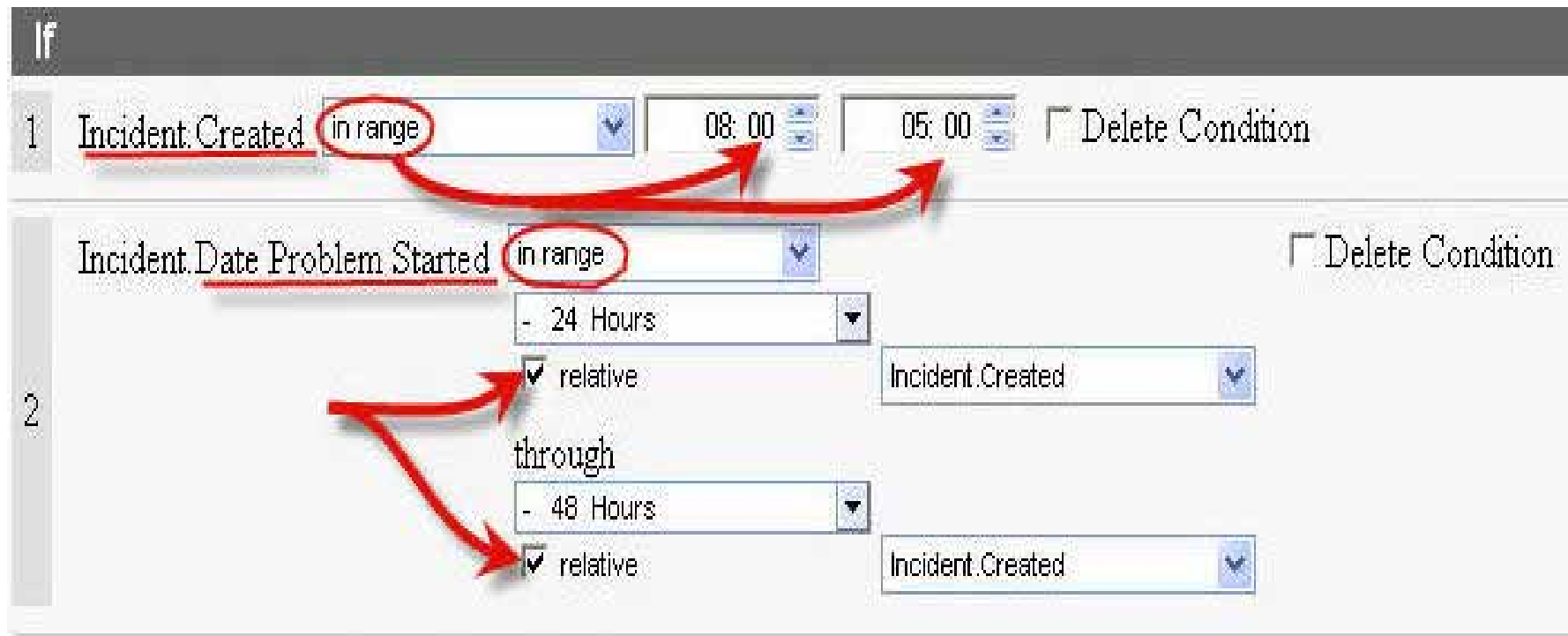
- 24 Hours

relative Incident.Created

through

- 48 Hours

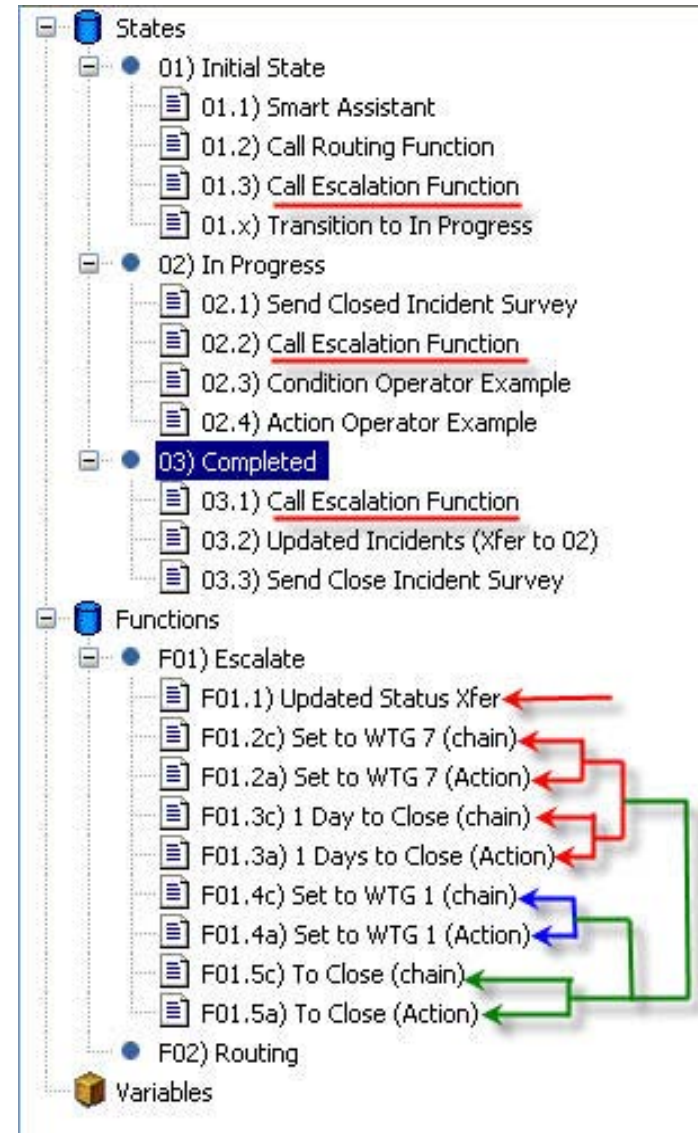
relative Incident.Created



- Contains
 - Uses word stemming
 - Sometimes less predictable
- Matches Regular Expressions:
 - Very powerful and predictable
 - Exact string matching (no word stemming)
 - Pattern matching
 - Can use multiple OR format
 - Regular expressions can be complex
 - Matching on subject incident data [Incident: 081006-000001]:
`\[Incident\\: \ [0-9][0-9][0-9][0-9][0-9][0-9]\\-[0-9][0-9][0-9][0-9][0-9][0-9]\\`

- Be very familiar with your rules
- Keep number of admins low (i.e. 1-2)
 - Communicate rule plan to all admins
- Avoid incomplete rule activations
- Completely test escalations
 - Answer #1231, 128, 2185, 2181
- Review rules before making changes
 - One change can affect entire rule base

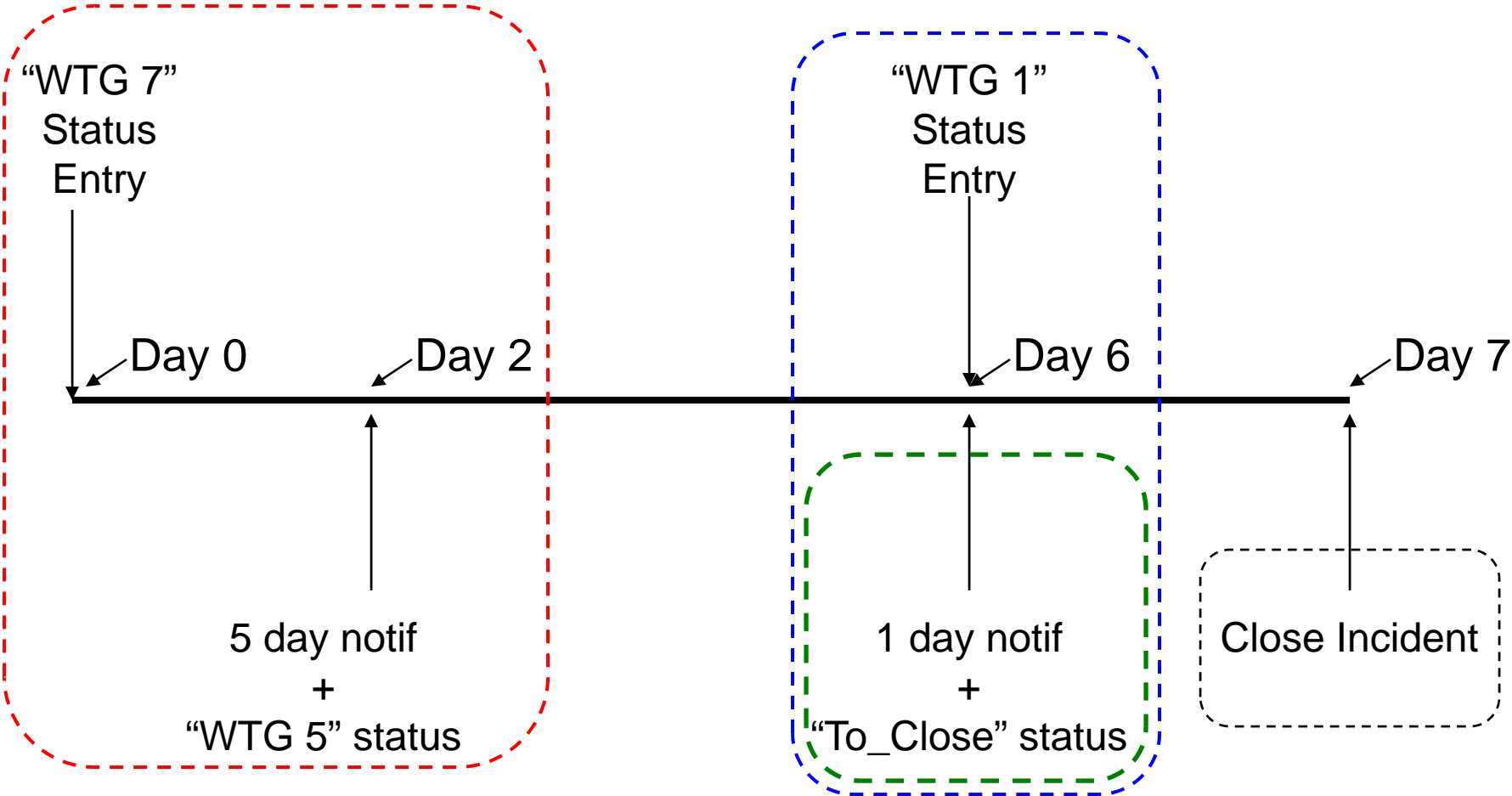
- Define needs before creating rules
 - Consider future needs/changes
 - Helps define rule order
 - Design rule flow chart
- Intuitive rule/state/function names
 - No rule names over 40 characters
 - Use naming convention
 - Number states/functions
 - Stick with it
- Use functions where possible
- Appendix



- Best Practices:
 - Use function(s) w/ call rules
 - Keep escalations simple
 - Escalations flow where possible
 - Rule escalation inner-dependency
 - DO NOT use “*previous*” fields in escalation chain rules
 - Does not revalidate well
 - Only in buffer
 - e.g. Incident.Previous Status
- Appendix
- Waiting to Close Example

- 2 Different business cases & rule sets:
 - Waiting for Customer Input
 - Waiting to Close
- Two entry points
 - 7 day (waiting for information from customer)
 - 1 day (confident of resolution)
- 3 escalations per flow (with notifs)
 - Escl - 5 days until close ("WTG 5" status) + 48 hours notif
 - Escl - 1 days until close ("WTG 1" status) + notif w/ 24 hours left
 - Escl - Close escalation rule

DEPENDENT RULE ESCALATION - Timeline



- 5 days until close ("WTG 5" status):
 - Notification 48 hours after "WTG 7" status set
 - Setup 96 hour escl, "1_Day_Left", from last update
- 1 day until close ("WTG 1" status):
 - Two notification options
 - Notification upon "1_Day_left" escalation OR
 - 15 minutes after set to "WTG 1"
- Close Incident:
 - Setup 24 hour escl, "To_Close", from last update
 - Close Action upon "To_Close" escalation

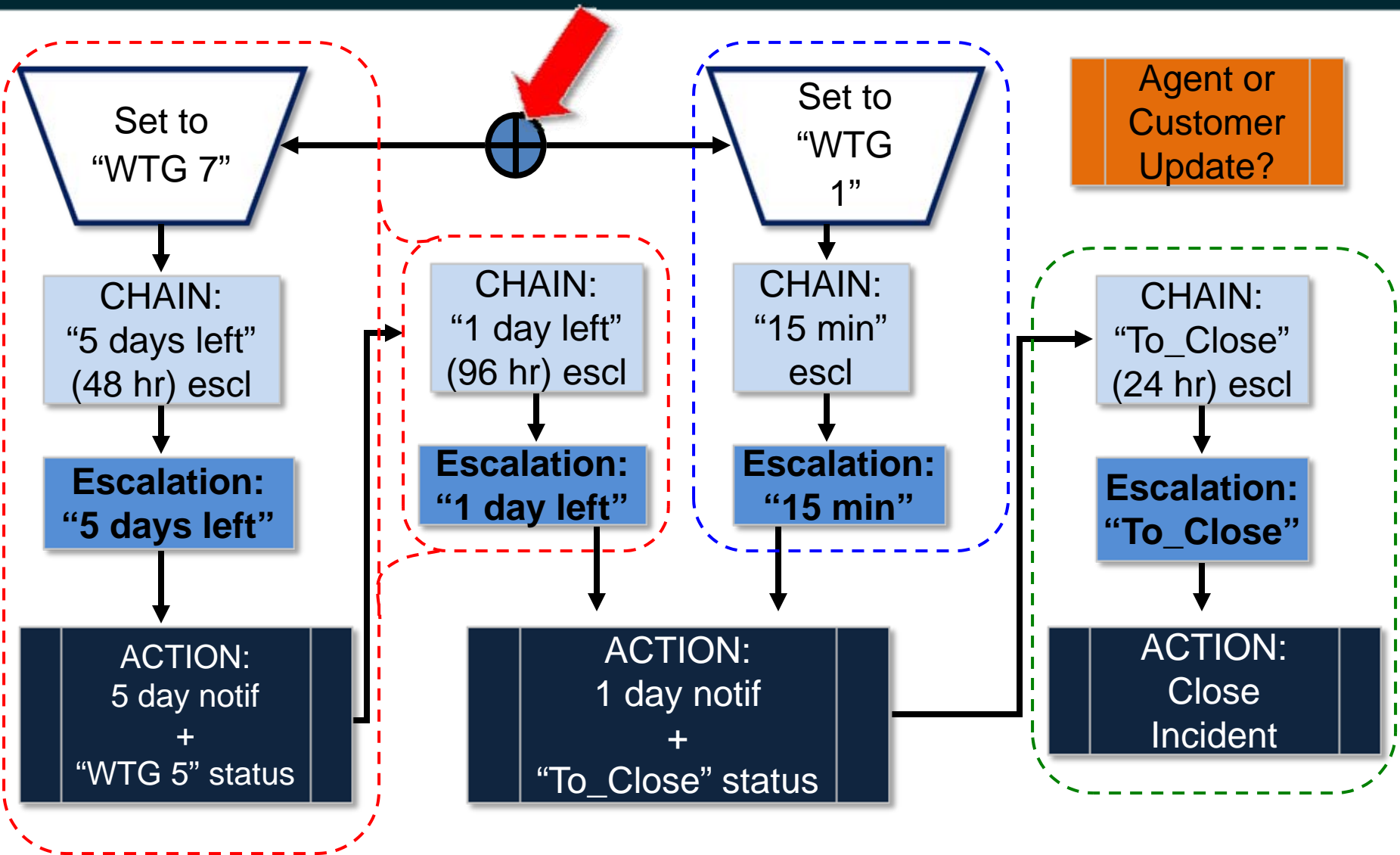
- Rule Escalation Dependencies Flow:
 - WTG 7: 5 days left → 1 day left
 - WTG 1: → 15 Min

} → To Close

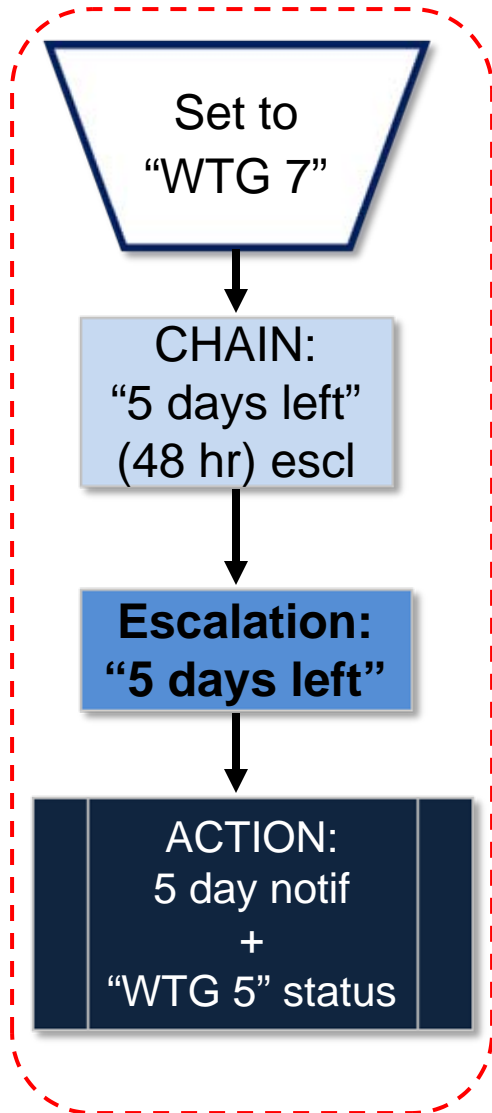
Differentiate Here
- Clear Escalation Level?
 - On customer update or agent status change
- 3 New Statuses Needed
 - WTG 7, WTG 5, WTG 1
- Test Cases:
 - WTG 5, WTG 1, Customer updates, Agent Status Changes, Secondary updates while escalating, others?

DEPENDENT RULE ESCALATION - Flow Diagram

**RIGHT
NOW.**



WTG 7 FLOW - 5 DAY NOTIFICATION RULE FLOW



- Entry point
 - Create "WTG 7" status
- 2 rules
 - Chain Escalation Rule
 - 48 hour after "WTG 7" status
 - "5 Days Left"
 - Escalation Action Rule
 - Send 5 Day notification standard text upon "5 Days Left" escalation
 - Set "WTG 5" status

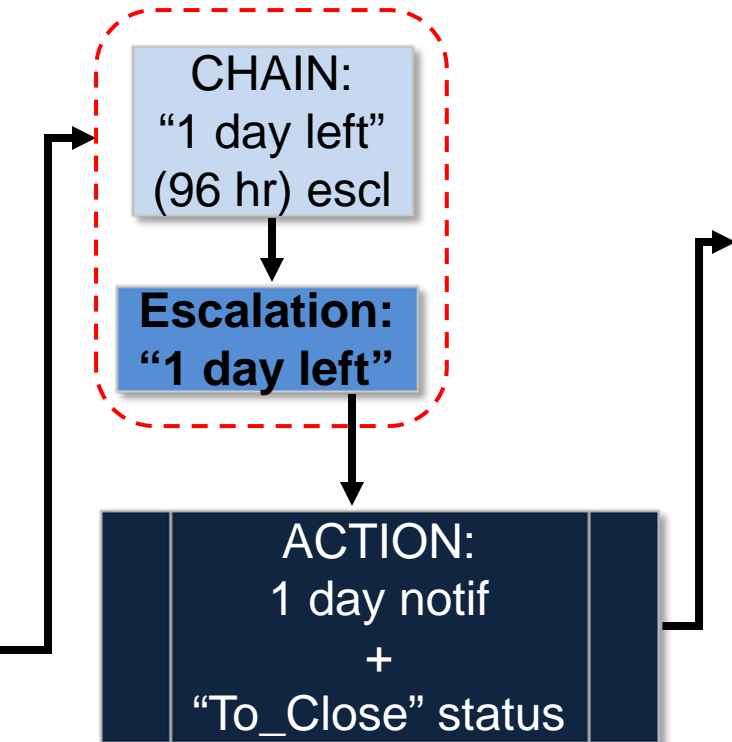
- 2 rules

- Escalation Chain Rule

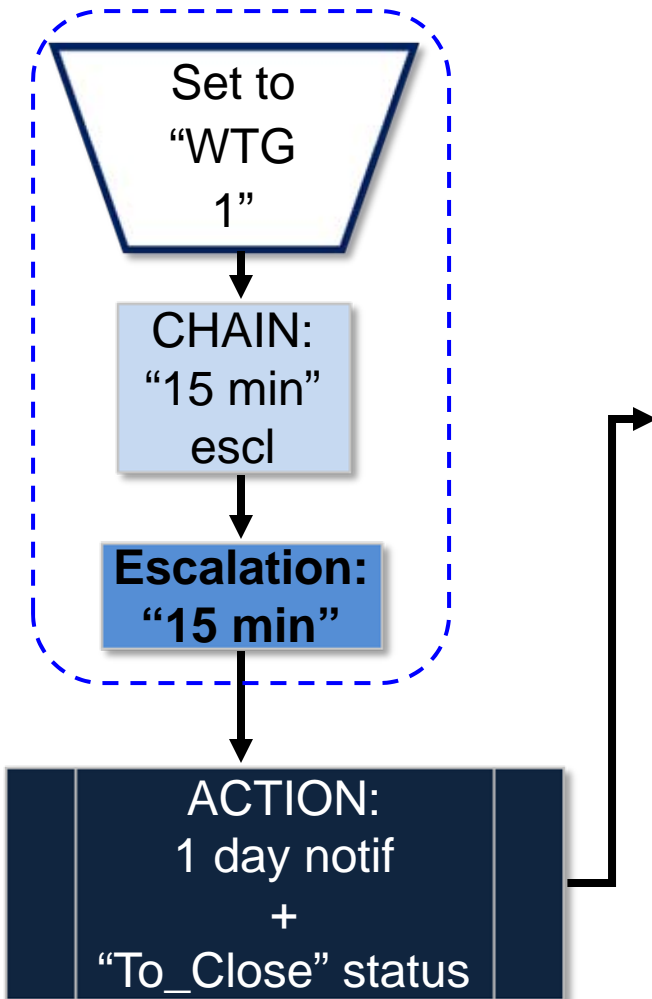
- Check previous “5 day left” escl level
- Check “WTG 5” status
- Escalate to “1 day left” in 96 hours

- Escalation Action Rule

- Send 1 Day notification standard text upon “1 Days Left” escalation
- Set “To_Close” status

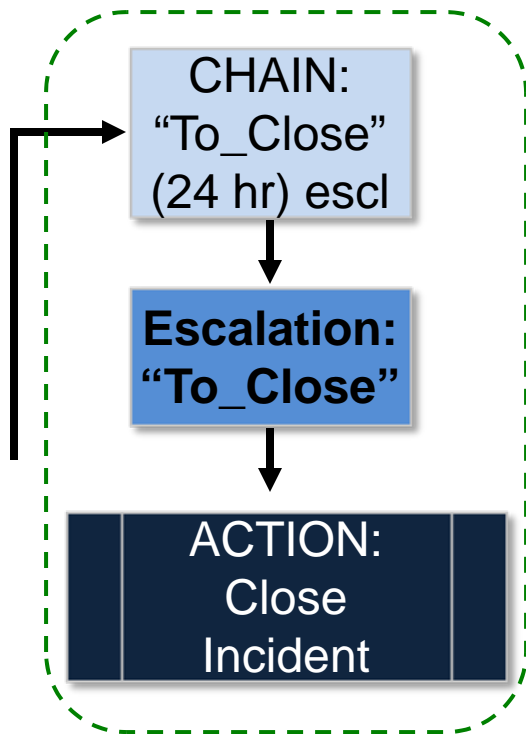


WTG 1 FLOW - 1 DAY NOTIFICATION



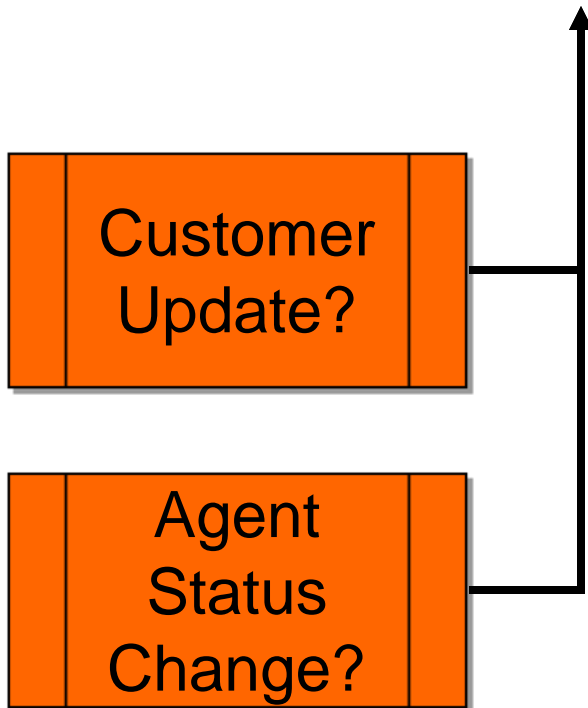
- Entry point
 - Create "WTG 1" status
- 2 rules
 - Chain Escalation Rule
 - 15 minutes after "WTG 1" status
 - "1 Days Left" escalation level
 - Escalation Action Rule
 - Send 1 Day notification standard text upon "1 Days Left" escalation
 - Set "To_Close" status

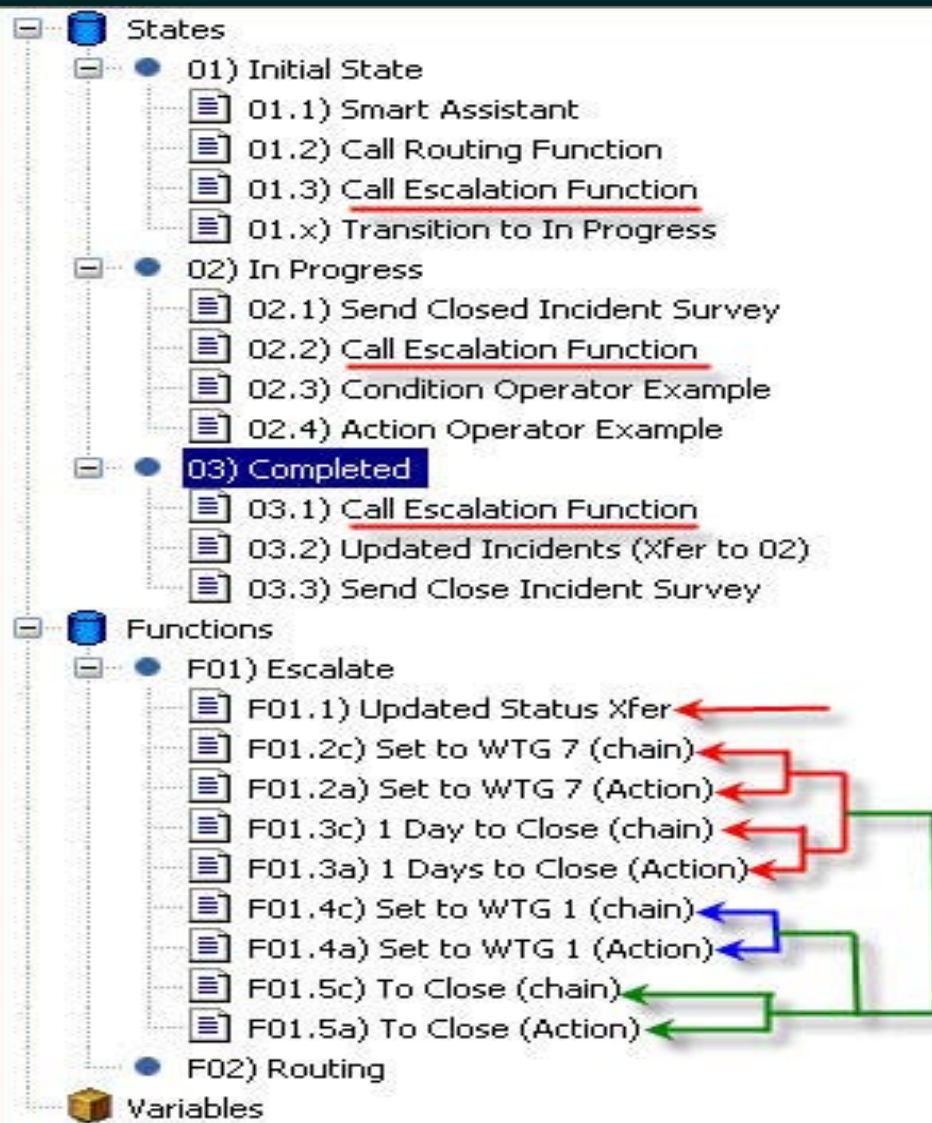
- Entry Point independent
- 2 rules
 - Escalation Chain Rule
 - Check previous “1 day left” escl level
 - Check “To_Close” status
 - Escalate to “To_Close” in 24 hours
 - Escalation Action Rule
 - Set “Solved” status
 - Send Closed Incident Survey?



- 1 rule

- Check current status EQUAL:
 - Updated
 - Unresolved
- Check previous status EQUAL:
 - WTG 7, WTG 5, WTG 1
 - To_Close
 - Solved
- Action
 - Clear Escalation Level
 - Transition state
 - “02) In Progress”





- Using the rule log
 - Tells you what rules fired
 - Compare rule log match times to audit log transaction times
 - Tells you what happened when rules fired
 - Rule Log Answer #1873
- Check rule state
 - Is the rule location/flow correct?
- PURGE_RULE_LOG_FREQ config verb (default 30 days)
 - Smallest value across multi-interface site is used

Audit Log

When	Who	What	Description
09/25/2008 10:40 AM	Administrator	Failure	To: ktietz@rightnow.com
09/25/2008 10:40 AM	Administrator	Changed Status	WTG 5
09/25/2008 10:40 AM	System	Escalated	To: 5 Days Left (WTG 7)
09/25/2008 10:40 AM	System	Edited	From Dbstatus Rule escalation
09/25/2008 09:06 AM	Full Access	Edited	From Incident Editor, Client IP Address:172.16.81.19
09/25/2008 09:06 AM	Full Access	Changed Status	WTG 7
09/25/2008 09:05 AM	Ad		
09/25/2008 09:05 AM	Ad		
09/25/2008 09:05 AM	Fu		
09/25/2008 09:05 AM	Fu		
09/25/2008 09:05 AM	Fu		

Rule Log

Type - ID

When	Rule	Action Clause
09/25/2008 10:40 AM	F01.3c) 1 Day to Close (chain) F01.2a) Set to WTG 7 (Action)	Then Then
	02.2) Call Escalation Function	Then
09/25/2008 09:06 AM	F01.2c) Set to WTG 7 (chain) 02.2) Call Escalation Function	Then Then
09/25/2008 09:05 AM	02.4) Action Operator Example 02.2) Call Escalation Function 01.x) Transition to In Progress 01.3) Call Escalation Function F02.2) Route to Queue B 01.2) Call Routing Function	Then Then Then Then Then Then

- Ask the Experts
- <http://crm.rightnow.com>
 - Answers
 - Documentation
 - Video Tutorials
 - Developer Community
 - » Forums
 - Submit an Incident

Make the most of rules... they are a powerful ally!

Questions??

- Task Rules
- More General Best Practices
- Escalations
 - Best Practices
 - Gotchas
- 7-5-1 Day to Close Escalation
 - Rule Flow Diagrams
 - Specific Rule Screen Shots

- Manage tasks based other areas of the product
 - Good application for functions
- Task rules runs first before other rules
 - Any changes made in other rules for current run will not be available for task rules
 - e.g. status change
- Example task rules

Edit Task Rule

Editing Rule in State: Create

Rule Name
Task Example

Notes

If

1 Incident.Status equals

- Solved
- Unresolved
- Updated
- Waiting

 Delete Condition

2 Tasks.Status not equals

- Not Started
- In Progress
- Completed
- Waiting

 Delete Condition

Add condition based on:

Logical Expression (& = and, | = or, e.g. 1 & (2 | 3))
1 & 2

Then

1 Set Status to Completed Delete Action

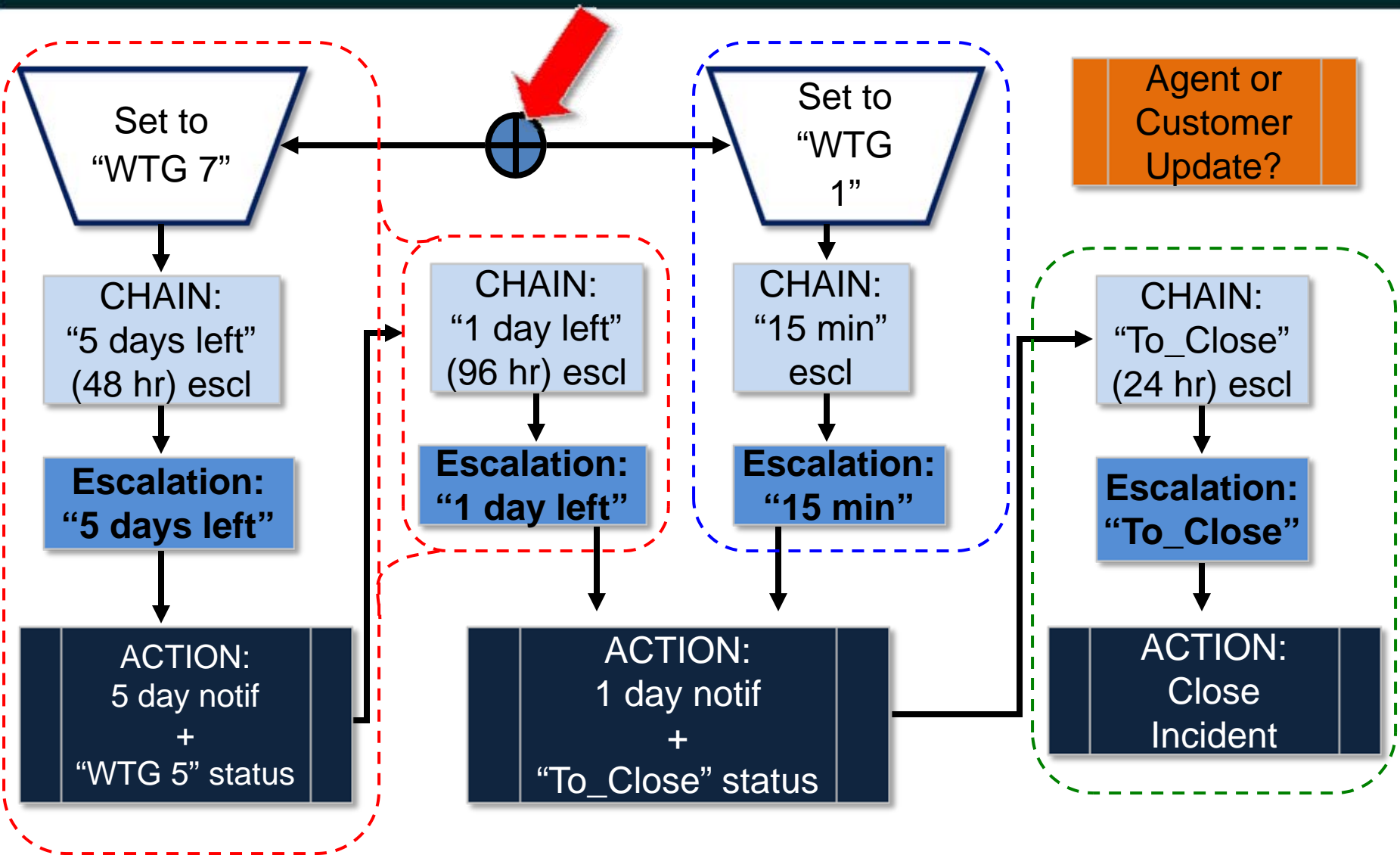
Add Action

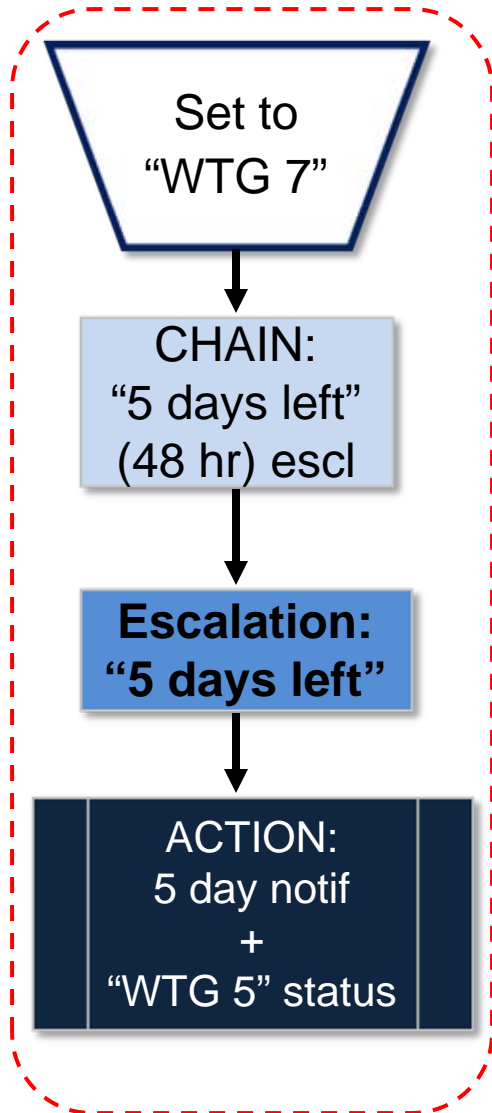
- Be careful with “Else”
 - Only 2 possible choices
 - Anything that does not match conditions will fire “Else”
- Know rule abilities/limitations
- Explore possibilities with other rule types
- Make the most of rules... they can be a powerful tool
 - Effective rule bases minimize manual tasks
 - Consistent procedures reduce human error

- Best Practices:
 - Put escalations into function(s)
 - Place rules that call the escalation function in appropriate states
 - Keep escalations simple
 - Try to make escalations flow where possible
 - Rule escalation inner-dependency
 - DO NOT use “*previous*” fields in escalation chain rules
 - Does not revalidate well
 - Only in buffer
 - e.g. Incident.Previous Status

- Can now escalate off of any defined date or date/time field
 - Use in conjunction with relative date conditions
 - Previously only a handful of hard-coded dates available
- High Volume Sites → Escalation to Close Incidents
 - In place of AgeDatabase close
- Escalation “Gotchas”
 - Escalations across rule states
 - Make sure escalation functions are called
 - Functions calls add data to rule log
 - Non-specific escalation conditions cause issues

DEPENDENT RULE ESCALATION - Flow Diagram





- Entry point
 - Create "WTG 7" status
- 2 rules
 - Chain Escalation Rule
 - 48 hour after "WTG 7" status
 - "5 Days Left"
 - Escalation Action Rule
 - Send 5 Day notification standard text upon "5 Days Left" escalation
 - Set "WTG 5" status

WTG 7 FLOW - 5 DAY NOTIFICATION CHAIN RULE

Editing Rule in Function: F01) Escalate

Rule Name

F01.2c) Set to WTG 7 (chain)

Notes

If

- 1 Incident.Status equals Delete Condition
- 2 Incident.Escalation Level equals Delete Condition

Add condition based on:

Logical Expression (& = and, | = or; e.g. 1 & (2 | 3))

1 & 2

Then

- 1 Escalate to Level Use Response Interval Revalidate Recalculate

Add Action

WTG 7 FLOW - 5 DAY NOTIFICATION ACTION RULE

Editing Rule in Function: F01) Escalate

Rule Name

F01.2a) Set to WTG 7 (Action)

Notes

If

1 Incident.Escalation Level equals

 Delete Condition

2 Incident.Previous Escalation Level not equals

 Delete Condition

Add condition based on:

Logical Expression (& = and, | = or; e.g. 1 & (2 | 3))

1 & 2

Then

1 Append Response Template to Response Field

2 Send Email Response to Sender
 Include question Include incident details

3 Set Status to

Add Action

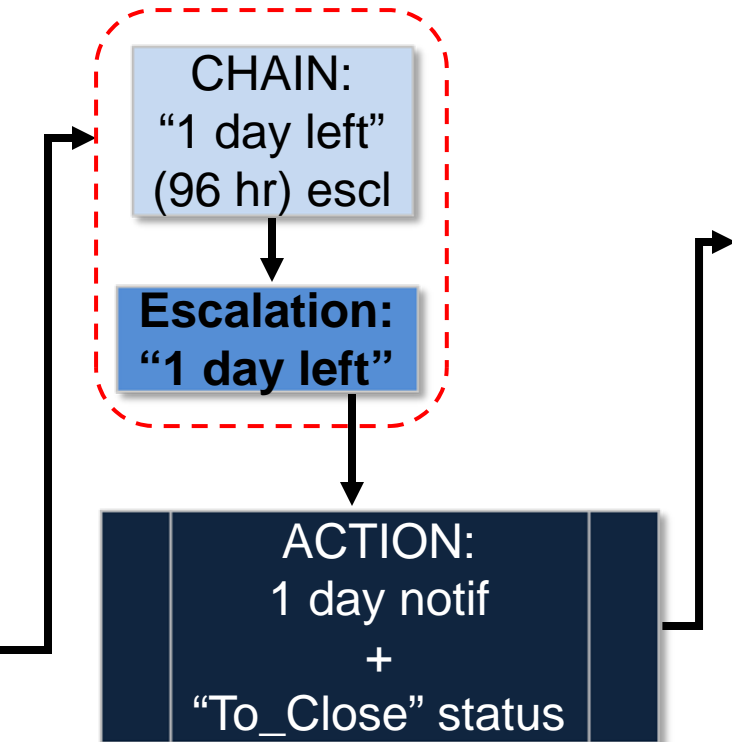
- 2 rules

- Escalation Chain Rule

- Check previous “5 day left” escl level
- Check “WTG 5” status
- Escalate to “1 day left” in 96 hours

- Escalation Action Rule

- Send 1 Day notification standard text upon “1 Days Left” escalation
- Set “To_Close” status



WTG 7 FLOW - 1 DAY NOTIFICATION CHAIN RULE

Editing Rule in Function: F01) Escalate

Rule Name

F01.3c) 1 Day to close (chain)

Notes

If

1 Incident.Status equals Delete Condition

2 Incident.Escalation Level equals Delete Condition

Add condition based on:

Logical Expression (& = and, | = or; e.g. 1 & (2 | 3))

1 & 2

Then

1 Escalate to Level
+ relative Use Response Interval Revalidate Recalculate

Add Action

WTG 7 FLOW - 1 DAY NOTIFICATION ACTION RULE

Editing Rule in Function: F01) Escalate

Rule Name

F01.3a) 1 Days to Close (Action)

Notes

If

1 Incident.Escalation Level equals Delete Condition

2 Incident.Previous Escalation Level not equals Delete Condition

Add condition based on:

Logical Expression (& = and, | = or; e.g. 1 & (2 | 3))

1 & 2

Then

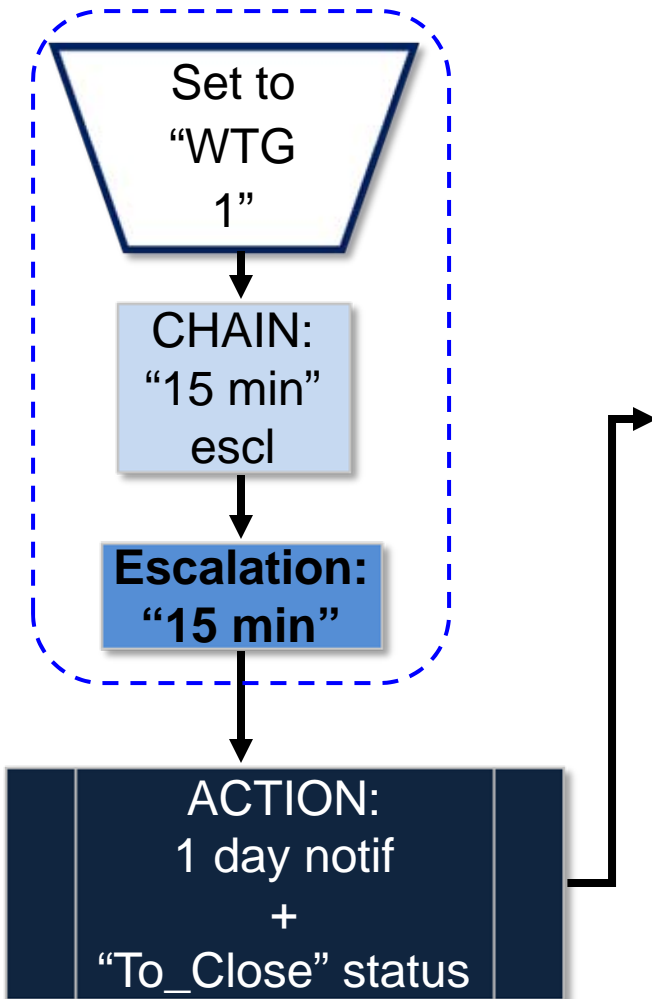
1 Append Response Template to Response Field

2 Send Email Response to Sender
 Include question Include incident details

3 Set Status to

Add Action

WTG 1 FLOW - 1 DAY NOTIFICATION



- Entry point
 - Create "WTG 1" status
- 2 rules
 - Chain Escalation Rule
 - 15 minutes after "WTG 1" status
 - "1 Days Left" escalation level
 - Escalation Action Rule
 - Send 1 Day notification standard text upon "1 Days Left" escalation
 - Set "To_Close" status

WTG 1 FLOW - 1 DAY CHAIN RULE

Editing Rule in Function: F01) Escalate



Rule Name

F01.4c) Set to WTG 1 (chain)

Notes

If

1

Incident.Status equals

WTG 7
WTG 5
WTG 1
Closed

Delete Condition

2

Incident.Escalation Level equals

1 Day Left (WTG 7)
5 Days Left (WTG 7)
To Close
Unspecified

Delete Condition

Add condition based on:

Logical Expression (& = and, | = or, e.g. 1 & (2 | 3))

1 & 2

Then

1

Escalate to Level 1 Day Left (WTG 1)

+ 24 Hours

relative

Incident.Date Last Responded

Use Response Interval Revalidate Recalculate

Add Action

WTG 1 FLOW - 1 DAY ACTION RULE

Editing Rule in Function: F01) Escalate

Rule Name

F01.3a) 1 Days to Close (Action)

Notes

If

- 1 Incident.Escalation Level equals
 - 1 Day Left (WTG 1)
 - 1 Day Left (WTG 7)
 - 5 Days Left (WTG 7)
 - To Close Delete Condition
- 2 Incident.Previous Escalation Level not equals
 - 1 Day Left (WTG 1)
 - 1 Day Left (WTG 7)
 - 5 Days Left (WTG 7)
 - To Close Delete Condition

Add condition based on:

Logical Expression (& = and, | = or; e.g. 1 & (2 | 3))

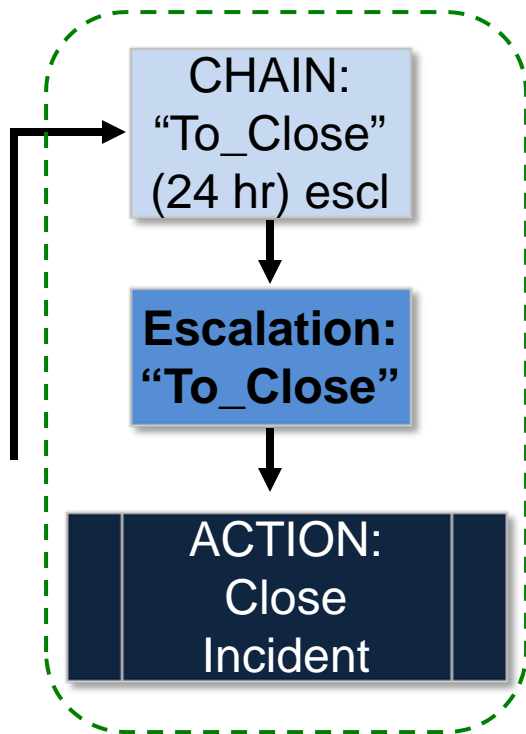
1 & 2

Then

- 1 Append Response Template to Response Field
 1 Day To Close Rule Text
- 2 Send Email Response to Sender
 Include question Include incident details
- 3 Set Status to
WTG 1

Add Action

- Entry Point independent
- 2 rules
 - Escalation Chain Rule
 - Check previous “1 day left” escl level
 - Check “To_Close” status
 - Escalate to “To_Close” in 24 hours
 - Escalation Action Rule
 - Set “Solved” status
 - Send Closed Incident Survey?



TO CLOSE CHAIN RULE

Editing Rule in Function: F01) Escalate

Rule Name

F01.5c) To Close (chain)

Notes

If

1

Incident.Status equals Delete Condition

2

Incident.Escalation Level equals Delete Condition

Add condition based on:

Logical Expression (& = and, | = or; e.g. 1 & (2 | 3))

1 & 2

Then

1

Escalate to Level

 relative
 Use Response Interval Revalidate Recalculate

Add Action

TO CLOSE ACTION RULE

Editing Rule in Function: F01) Escalate

Rule Name

F01.5a) To Close (Action)

Notes

If

- 1 Incident.Escalation Level equals 1 Day Left (WTG 1)
1 Day Left (WTG 7)
5 Days Left (WTG 7)
To Close Delete Condition
- 2 Incident.Previous Escalation Level not equals 1 Day Left (WTG 1)
1 Day Left (WTG 7)
5 Days Left (WTG 7)
To Close Delete Condition

Add condition based on:

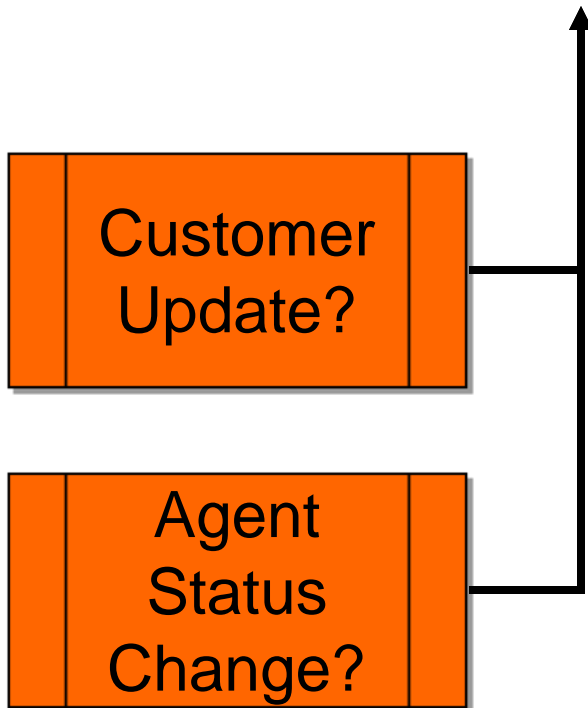
Logical Expression (& = and, | = or; e.g. 1 & (2 | 3))

1 & 2

Then

- 1 Set Status to
Closed
- 2 Transition State and continue
03) Completed

- 1 rule
 - Check current status EQUAL:
 - Updated
 - Unresolved
 - Check previous status EQUAL:
 - WTG 7, WTG 5, WTG 1
 - To_Close
 - Solved
 - Action
 - Clear Escalation Level
 - Transition state
 - “02) In Progress”



CUSTOMER UPDATES OR AGENT STATUS CHANGES

Editing Rule in Function: F01) Escalate

Rule Name

F01.1) Updated Status Xfer

Notes

If

- 1 Incident.Status equals
 - Updated
 - Unresolved
 - Waiting
 - Unspecified Delete Condition
- 2 Incident.Previous Status equals
 - WTG 7
 - WTG 5
 - WTG 1
 - Closed Delete Condition

Add condition based on:

Logical Expression (& = and, | = or, e.g. 1 & (2 | 3))

1 & 2

Then

- 1 Clear Escalation Level Delet
- 2 Transition State and continue
 - 02) In Progress Delet

