

# Application Note

**Script Name:** DTA Detect and Clear  
**Version:** 2.1  
**Script P/N:** 130-9500-0082  
**Date:** June 27, 2011

## Summary

This script automates the procedure of disabling and re-enabling a loop that has generated an error. It will also disable and re-enable any associated D-channel or B-channels that may be present. In some circumstances, this procedure may resolve an error condition without the need for technician intervention.

This script is a Python version of the SCL script SL0003A (DTA021 Detect and Clear). The purpose of the script is to try to clear the loop error condition. The script is executed when a DTA021, DTA012, or DTA005 event occurs without a corresponding DTA023 or DTA007 occurring within 3 minutes (or other time period selected by the administrator).

When the XNC (event not correlated) is received, the script is queued for execution. When the script runs, it logs into the switch, attempts to enter the LD 60 program, and retrieves the associated D-channel number (if any). If a D-channel is present, the script loads the LD 96 program and disables the D-channel. The loop is disabled and re-enabled and the D-channel is re-enabled. The script performs a STAT on the loop again, analyzes the results, and generates an event reporting the outcome of the commands.

If no D-channel is associated with the loop then the status of the loop and B-channels will be examined. The script disables then re-enables the loop any B-channels if it any are down. Once the task has been completed the script retrieves and parses a status, the script reports an Informational or Critical alarm based on the results of the parsing.

## Dependencies

The Clear DTA021 Error Condition script requires the following MedTel Services library scripts: utils v2.0 or higher  
mllib v1.0 or higher

The Clear DTA021 Error Condition script requires the following software releases:  
IRISnGEN v4.0 or higher

SEBea Application v5.0 or higher  
NET-PATH Application v1.0 or higher  
\*NOTE: NET-PATH requires IRISnGEN v5.1 or higher.

## Parameters

Parameter Name	Description
DEBUG	Including the DEBUG parameter causes the script to generate debug messages that are stored in a file in \FLASH\USER. The file name begins with the first letter of the host name, followed by a seven-digit number and the extension .DBG.
TRACE	Including the TRACE parameter causes the script to generate debug messages, which are sent to the output device specified (Telnet session, modem, serial port) using the debug command. These messages display only when the PY level of debugging is turned on.

## Parameter Usage

Specify parameters in the Parameters field of the Event Detection tab or Script Action tab with which the script is associated. The following is an example of correct usage of the parameters:

TRACE

## Script Events

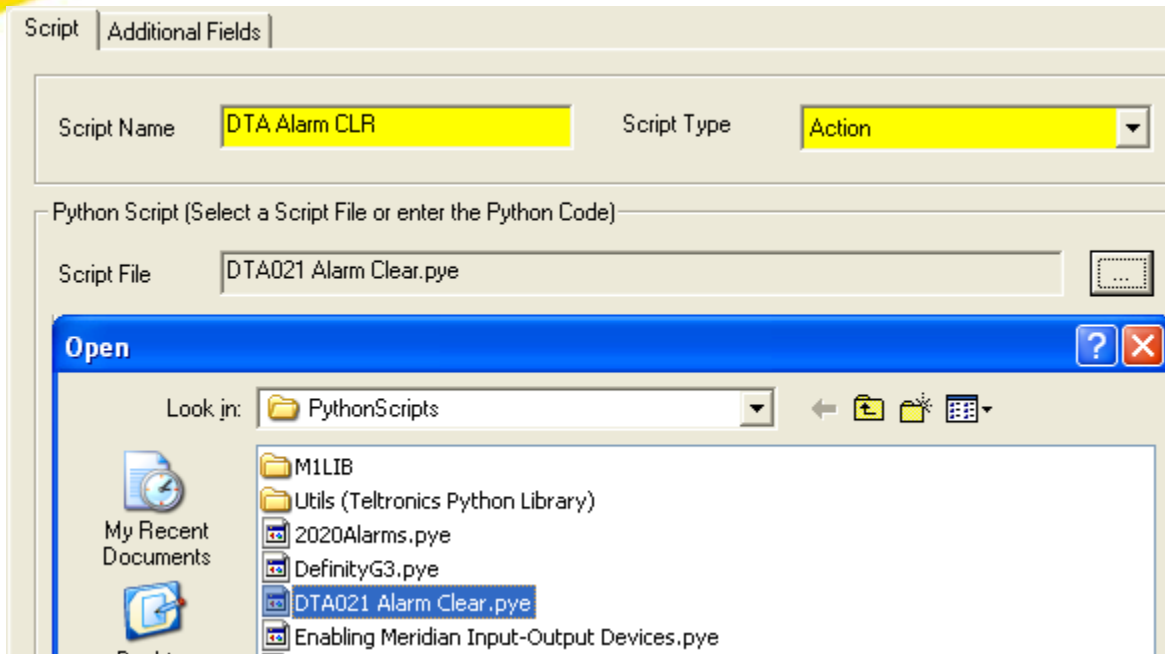
Trigger Word	Event Data
M1-T1001	M1- T1001: No response from host. Sent: <Data sent to host or function executed> Received: Nothing. Expected: <Expected responses>
M1- T1002	M1- T1001: Unrecognized response from host. Sent: <Data sent to host or function executed> Received: <First 50 bytes of data received from host> Expected: <Expected responses>
M1- T1003	M1- T1003: OVL429 – Someone else is in a maintenance load.
M1- T1004	M1- T1004: Could not retrieve host user name.

M1- T1005	M1- T1005: Could not retrieve host password.
M1- T1006	M1- T1006: Invalid password. <Response from host>
M1- T1007	M1- T1007: OVL013 – Invalid command.
M1- T1008	M1- T1008: PBX is in LD 43 data dump

M1- T1010	M1- T1010: Error extracting custom variable LOOP. <Additional information>
M1- T1011	M1- T1011: Could not enable loop xxx.
M1- T1012	M1- T1012: Alarm cleared on loop xxx.
M1- T1013	M1- T1013: Failed to clear alarm on loop xxx.
M1- T1014	M1- T1014: Error re-enabling D-channel xx.
M1- T1015	M1- T1015: Failed re-enabling B-channel xx.

## Installation

1. Copy the script file, DTA Clear.pye to the directory \irishome\Python Scripts.
2. Create a new Script in IRISnGEN. Point the script's file path to \irishome\Python Scripts\DTA Clear.pye. You must select Files of Type for Encrypted Python Scripts (\*.pye) in order to see the available .pye scripts.
3. Set the Script Type to Action.



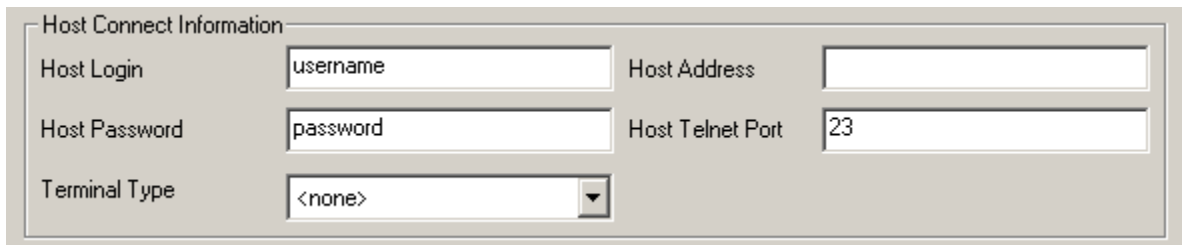
# Database Configuration

## Input

Input configuration describes the database objects that must be defined in order for the script to run and to accept data from the host device.

### Host Information

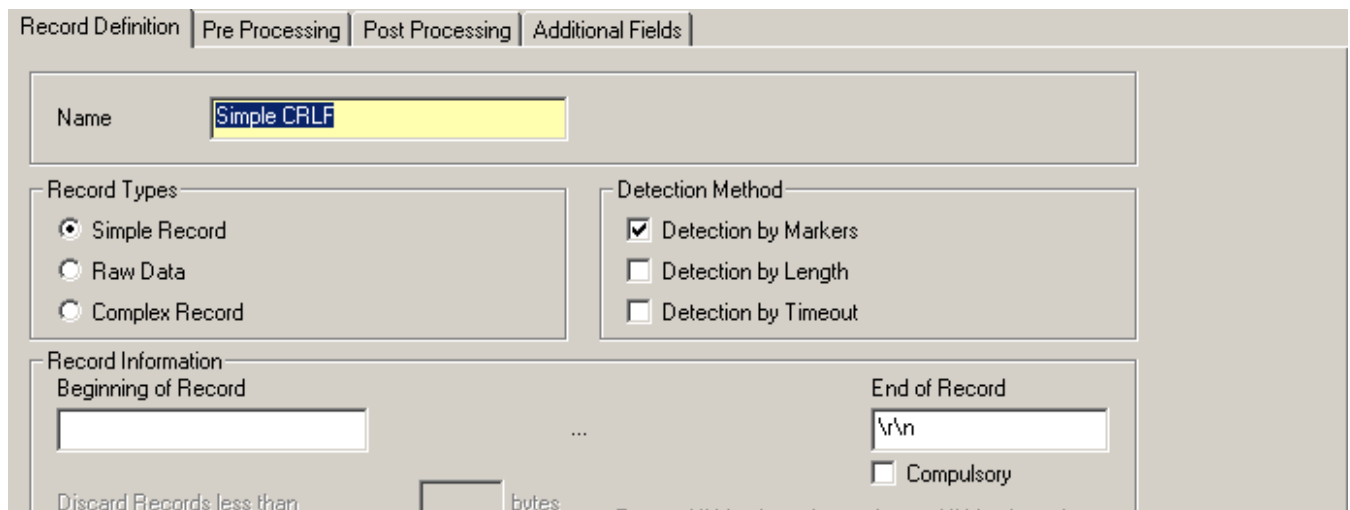
1. Enter the user name for the PBX login under the Host Connect Information \ Host Login on the host tab of the host you are using for the CS1000 host port.



A screenshot of a web form titled "Host Connect Information". It contains four input fields: "Host Login" with the value "username", "Host Address" (empty), "Host Password" with the value "password", and "Host Telnet Port" with the value "23". There is also a "Terminal Type" dropdown menu currently set to "<none>".

### Event Detections

2. Create an Event Detection that uses \r\n as the End of Record. If you already have an Event Detection for CS1000 alarm detection, you may continue to use that Event Detection.



A screenshot of a web form titled "Record Definition" with tabs for "Pre Processing", "Post Processing", and "Additional Fields". The "Name" field contains "Simple CRLF". Under "Record Types", "Simple Record" is selected. Under "Detection Method", "Detection by Markers" is checked. In the "Record Information" section, "End of Record" is set to "\r\n" and "Compulsory" is unchecked. There is also a "Beginning of Record" field and a "Discard Records less than" field.

3. Add the Event Detection to the Host Library you are using for the CS1000 host port.

Event Detections | Event Matches | Filters | Thresholds | Correlations | Expects | Scripts | Users | Tasks | Host L

Host Library Name: Charlotte - NPath Meridian Port1 Lib

Groups

Name
------

Items

Name
Simple CRLF

## Event Matches

1. Configure Event Matches for the DTA021, DTA012, DTA005, DTA007, and DTA023 events. For each Event Match, configure a Variable Extraction Template, extracting the loop number to a variable called LOOP. Make sure that the Store checkbox is checked for the variable.

Event Match (Data) | Trigger Words | Additional Fields

Name: DTA021

Static Event Message:

Event Match (Data) | Trigger Words | Additional Fields

Trigger Words

Trigger Word	Search Type	Start Column	Column Range	Start Line
DTA005	Record	0	0	0

Variable Extraction Template for the above selected Trigger Word

TW	Type	Store	Name	Length	Format
<input checked="" type="checkbox"/>	String	<input type="checkbox"/>		0	
<input type="checkbox"/>	Whitespace	<input type="checkbox"/>		0	
<input type="checkbox"/>	String	<input checked="" type="checkbox"/>	LOOP	0	

2. Create an Event Match Group to assign all the events together.

Event Match Group

Group Name: Meridian DTA Events

Grouped Items

Group	Name
<input checked="" type="checkbox"/>	DTA005
<input checked="" type="checkbox"/>	DTA007
<input checked="" type="checkbox"/>	DTA012
<input checked="" type="checkbox"/>	DTA021
<input checked="" type="checkbox"/>	DTA023

3. Add the Event Match Group to the Host Library you are using for the CS1000 host port.

Event Detections | Event Matches | Filters | Thresholds | Correlations | Expects | Scripts | Users | Tasks | Host Library

Find all Event Matches

Groups

Name
Meridian DTA Events

## Actions

1. Create a Script Action. The Script Action record must reference the Script that you added to the IRISnGEN system during Script Installation.
2. Enable the DEBUG or TRACE features by including the appropriate parameter in the Parameters field of the Script Action.

The screenshot shows the 'Script Action' configuration window. It has two tabs: 'Script Action' and 'Additional Fields'. Under 'Action settings', 'Action Name' is 'Meridian DTA Event Action', 'Action Type' is 'Script', 'Priority' is 'Medium', and 'Action Window' is '<none>'. Under 'Script settings', 'Execute Script' is 'DTA Alarm CLR', 'Host Name' is 'Charlotte-Meridian Port1', and 'Parameters' is 'TRACE'.

## Correlations

1. Configure a Remote Agent Correlation for the DTA021, DTA012, DTA005, DTA007, and DTA023 events. The Correlation expression should be:  
(DTA021 OR DTA012 OR DTA005) AND (DTA007 OR DTA023)
2. Check the "Event order is important" checkbox.
3. Set the Correlation Duration as desired (3 minutes recommended).

The screenshot shows the 'Correlation' configuration window. It has three tabs: 'Correlation', 'Actions', and 'Additional Fields'. Under 'Name', it is 'Meridian DTA Event Correlation' and 'Action Window' is '<none>'. Under 'Duration', it is '0 day 00 hr 03 min'. The 'Correlation Expression' field contains '( DTA021 OR DTA012 OR DTA005 ) AND ( DTA007 OR DTA023 )'. The 'Event order is important' checkbox is checked.

4. Specify LOOP as the unique variable.



Unique Variables

Name
LOOP

- Click on the Actions tab of the Correlation record. Set the Unsuccessful Correlation action to the Script Action configured in Actions: Step 1 above.

Unsuccessful Correlation

Reprocess Not Correlation Summary Event (XNC)

Actions

Action	Override Layout	Failed Action Group
Meridian DTA Event Action		

- Add the Correlation on the Correlations tab of the host library you are using for the CS1000 host port.

Event Detections | Event Matches | Filters | Thresholds | Correlations | Expects | Scripts | Users | Tasks | Hc

Groups

Name

Items

Name
Meridian DTA Event Correlation

## Output

The output configuration describes the database objects necessary to process information received through the script function.

### Event Detections

1. Add an Event Detection that uses `\r\n` as the End of Record. If you already have an Event Detection in place for CS1000 alarm detection, you may continue to use that Event Detection, or you may use the one configured in Input: Event Detections above.

Record Definition | Pre Processing | Post Processing | Additional Fields

Name: Simple CRLF

Record Types:  
 Simple Record  
 Raw Data  
 Complex Record

Detection Method:  
 Detection by Markers  
 Detection by Length  
 Detection by Timeout

Record Information:  
Beginning of Record: [ ] ...  
End of Record: \r\n  
 Compulsory

Discard Records less than [ ] bytes

2. If you have created a new Event Detection, add it to the Host Library you are using for the CS1000 host port.

Event Detections | Event Matches | Filters | Thresholds | Correlations | Expects | Scripts | Users | Tasks | Host L

Host Library Name: Charlotte - NPath Meridian Port1 Lib

Groups:  
Name: [ ]

Items:  
Name: Simple CRLF

## Event Matches

1. Configure Event Matches for the events described in the Script Events section above.

Event Match (Data) | Trigger Words | Additional Fields |

Name

Event Match (Data) | Trigger Words | Additional Fields |

Trigger Words

Trigger Word	Search Type	Start Column	Column Range	Start Line	Line Range
M1-T1001	Record	0	0	0	0

2. Create Event a Match Group to assign all the script events together.

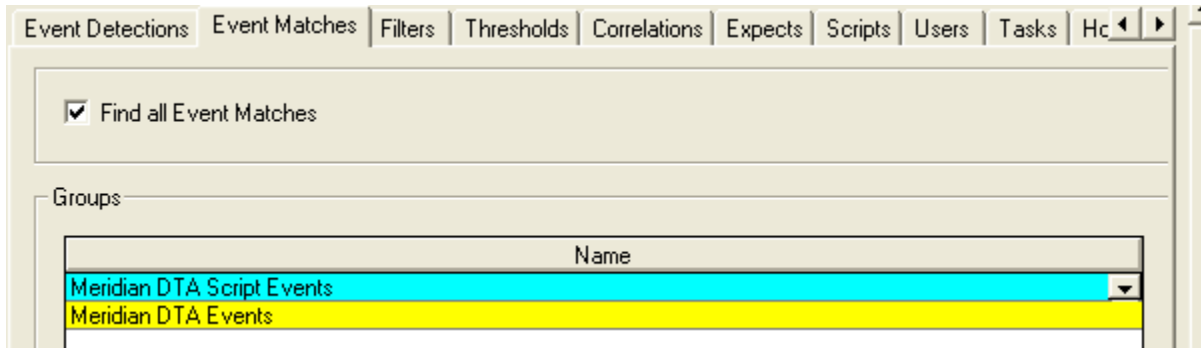
Event Match Group |

Group Name

Grouped Items

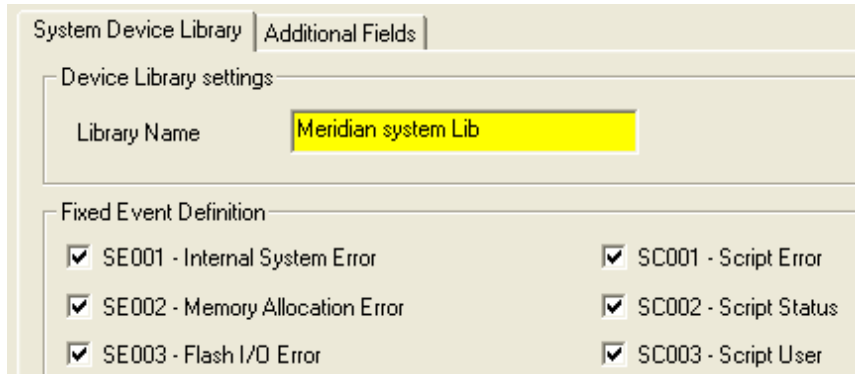
Group	Name
<input checked="" type="checkbox"/>	M1_T1001
<input checked="" type="checkbox"/>	M1_T1002
<input checked="" type="checkbox"/>	M1_T1003
<input checked="" type="checkbox"/>	M1_T1004
<input checked="" type="checkbox"/>	M1_T1005
<input checked="" type="checkbox"/>	M1_T1006
<input checked="" type="checkbox"/>	M1_T1007
<input checked="" type="checkbox"/>	M1_T1008
<input checked="" type="checkbox"/>	M1_T1009
<input checked="" type="checkbox"/>	M1_T1010
<input checked="" type="checkbox"/>	M1_T1011
<input checked="" type="checkbox"/>	M1_T1012
<input checked="" type="checkbox"/>	M1_T1013
<input checked="" type="checkbox"/>	M1_T1014

Add the new Event Matches to the Host Library you are using for the CS1000 host port.



## Fixed Events

To monitor Script Fixed Events, enable events SC001, SC002, and SC003 in the System Device Library. Assign the System Device to a Host having filters in its Host Library that manage the events.



## Filters

1. Configure Filters for any of the Script Events you wish to report or store.

Filter | Additional Fields

Filter Name: Meridian DTA script Events filter | Action Window: <none>

Event

Event: <none>

Event Match Group: Meridian DTA Script Events

Fixed Event Group: <none>

Variable Expression

Filter Actions

Action	Override Layout	Failed Action Group
SNMP V3 inform to IRISnGEN		

2. Add the Filters to the Host Library you are using for the CS1000 host port.

Event Detections | Event Matches | Filters | Thresholds | Correlations | Expects | Scripts | Users | Tasks | Host Libra

Groups

Name

Items

Meridian DTA script Events filter

3. Configure Filters for any of the Meridian DTA Events you wish to report or store and add them to the Host library you are using for the CS1000 host port.
4. Configure Filters for any of the Script Fixed Events you wish to report and add them to the host library assigned to the system device.

## Logic Flow

