What does maximum work per expression scanning error mean?

Contents

Introduction

This document describes the meaning of the error message "Scanning Problem: maximum work per expression/data limit exceeded" and how to solve the problems caused due to it.

Background Information

The error message "Scanning Problem: maximum work per expression/data limit exceeded" can be due to dictionary entries, content filters, or message filters that have many regular expression (RegEx) matches. This error can occur because of these reasons:

- When a large number of entries are listed in a dictionary.
- Regular expressions (RegEx) that contain variable length matches (Example: **.*** , **.+** or **.{5,}**).

Large dictionaries and broad matching regular expressions require significant system resources and should be avoided.

Examples of "maximum work per expression" Error Messages

Mail Logs

```
Thu Feb 15 12:01:20 2021 Warning: MID #######,
Message Scanning Problem: maximum work per expression/data limit exceeded
```

Message Tracking

```
Message ###### encountered message scanning error: maximum work per expression/data limit
exceeded
```

Application Fault

```
An application fault occurred: ('egg/filters.py expand_short_url|1570',
"<type 'exceptions.RuntimeError'>", 'maximum work per expression/data limit exceeded',
'[egg/omh.py queue_worker_thread|3733] [egg/omh.py process_item|4209]
[egg/omh.py pass_spamcheck|6402] [egg/omh.py update_url_reporting_info|4951]
[egg/filters.py get_web_info|1810] [egg/filters.py fetch_urlinfo|1480]
[egg/filters.py get_url_info|1658] [egg/filters.py get_expanded_url_list|1606]
[egg/filters.py expand_short_url|1570]') MID: #######
```

Troubleshoot

Dictionaries

Via the GUI

1. Log into your Secure Email Gateway's GUI.
2. Hover over **Mail Policies.**
3. Click **Dictionaries**.
4. Review the dictionaries and entries.

Via the CLI

```
> dictionaryconfig

Currently configured content dictionaries:
1. Test

Choose the operation you want to perform:
- NEW - Create a new content dictionary.
- EDIT - Modify a content dictionary.
- DELETE - Remove a content dictionary.
- RENAME - Change the name of a content dictionary.
- CLUSTERSET - Set how content dictionaries are configured in a cluster.
- CLUSTERSHOW - Display how content dictionaries are configured in a cluster.
[]>
```
Review the dictionaries and entries.

Content Filters

Via the GUI

1. Log into your Secure Email Gateway's GUI.

2. Hover over **Mail Policies**.
3. Click **Incoming Content Filters** or **Outgoing Content Filters.**
4. Review the filters.

Via the CLI

```
> policyconfig

Would you like to configure Incoming Mail Policy or Outgoing Mail Policies or Match Headers
Priority?
1. Incoming Mail Policies
2. Outgoing Mail Policies
3. Match Headers Priority
[1]> 1 <- Enter 1 or 2

Incoming Mail Policy Configuration
Name: Anti-Spam: Anti-Virus: Advanced Malware Protection: Graymail: Content Filter:
Outbreak Filters: Advanced Phishing Protection
----- ------------ ---------- --------------------------- ------------- ----------------
--------------- ---------------------------
DEFAULT Off Sophos Off Off Enabled
Retention Time: N/A

Virus: 15 minutes

Choose the operation you want to perform:
- NEW - Create a new policy
- EDIT - Edit an existing policy
- PRINT - Print all policies
- FILTERS - Edit content filters
- CLUSTERSET - Set how Incoming Mail Policies are configured in a cluster
- CLUSTERSHOW - Display how Incoming Mail Policies are configured in a cluster
[]> filters

Defined filters:
1. example_filter_one
2. example_filter_two

Choose the operation you want to perform:
- NEW - Create a new filter
- EDIT - Edit an existing filter
- DELETE - Delete a filter
- PRINT - Print all filters
- MOVE - Reorder a filter
- RENAME - Rename a filter
```
Review the filters. Repeat for Outgoing Content Filters if needed.

Message Filters

Via the GUI

Not available.

Via the CLI

```
> filters

Choose the operation you want to perform:
- NEW - Create a new filter.
- DELETE - Remove a filter.
- IMPORT - Import a filter script from a file.
- EXPORT - Export filters to a file
- MOVE - Move a filter to a different position.
- SET - Set a filter attribute.
- LIST - List the filters.
- DETAIL - Get detailed information on the filters.
- LOGCONFIG - Configure log subscriptions used by filters.
- ROLLOVERNOW - Roll over a filter log file.
- CLUSTERSET - Set how filters are configured in a cluster.
- CLUSTERSHOW - Display how filters are configured in a cluster.
[]> list

Num Active Valid Name
1 Y Y example_message_filter
```
Review the filters.

Related Information

- [Cisco Secure Email Gateway End-User Guides](#)
- [Cisco Secure Email Gateway Release Notes](#)
- **[Technical Support & Documentation - Cisco Systems](#)**