[MS-CCEIP]:
Corporate Customer Experience Improvement Program Client-to-Server Protocol Specification

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Revision Summary

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06/20/2008	0.01.1	Editorial	Revised and edited the technical content.
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02/11/2011	1.0.3	No change	No changes to the meaning, language, or formatting of the technical content.

Contents

1   Introduction

This document specifies the Corporate Customer Experience Improvement Program Client-to-Server Protocol. When implemented, data generated on a set of client machines participating in the **Customer Experience Improvement Program** may be redirected to the **CEIP service** through a **CEIP server**.

1.1   Glossary

The following terms are specific to this document:

CEIP client: A client configured to use the **Customer Experience Improvement Program** Client-to-Server Protocol.

CEIP server: A server configured to redirect **CEIP data** sent by a set of **CEIP clients** to the **CEIP service**.

CEIP service: A service configured to receive **CEIP data** sent by a **CEIP server** or **CEIP client**.

CEIP data: Anonymous information contained in a set of files that describe usability, performance, reliability, and quality metrics.

Customer Experience Improvement Program (CEIP): A program in which participating systems send information to Microsoft about how they use certain products. Received **CEIP data** is combined to help Microsoft solve problems and to improve the products and features that customers use most often.

MAY, SHOULD, MUST, SHOULD NOT, MUST NOT: These terms (in all caps) are used as described in [RFC2119]. All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

1.2   References

1.2.1   Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624, as an additional source.

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, http://www.ietf.org/rfc/rfc2119.txt

[RFC2616] Fielding, R., Gettys, J., Mogul, J., et al., "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2616, June 1999, http://www.ietf.org/rfc/rfc2616.txt

1.2.2   Informative References

None.

1.3 Overview

The Corporate Customer Experience Improvement Program Client-to-Server Protocol allows an administrator to manage **CEIP data** sent from a set of **CEIP clients** on a specified HTTP Web server.

A CEIP client which has joined the Corporate Customer Experience Improvement Program generates anonymous CEIP data. The Corporate Customer Experience Improvement Program Client-to-Server Protocol does not create or change this data.

The CEIP client performs a check to determine if a CEIP server URL is specified for this client system. If a Corporate Server URL has been specified, the CEIP client sends the CEIP data to the specified Corporate Server URL with the actual CEIP service URL in the query string.

The CEIP server redirects the CEIP data sent by the client machines to the CEIP service. Standard HTTP Responses are honored by the CEIP client and CEIP server.
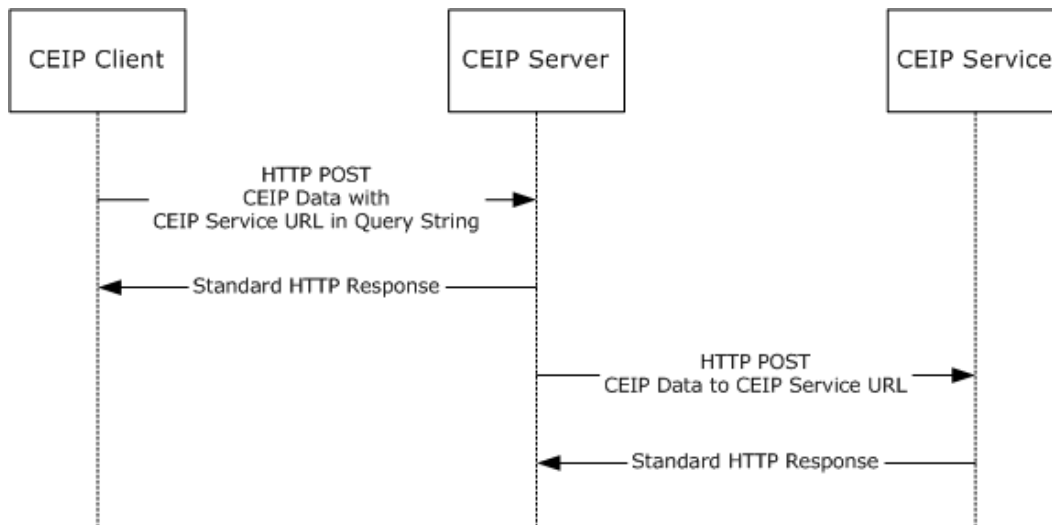

Figure 1: Overview of MS-CCEIP functionality

1.4 Relationship to Other Protocols

The Corporate Customer Experience Improvement Program Client-to-Server Protocol uses HTTP [RFC2616] to transfer CEIP data from the CEIP client to the CEIP service through the CEIP server.

No protocols depend on the Corporate Customer Experience Improvement Program Client-to-Server Protocol.

1.5 Prerequisites/Preconditions

For the CEIP client to be able to send CEIP data to the CEIP server, the following MUST be true:

- The CEIP client is configured with the URL of the CEIP server.

- The CEIP client has permission to post data to the CEIP server.

1.6 Applicability Statement

The Corporate Customer Experience Improvement Program Client-to-Server Protocol is not designed to be used by any other protocols. It is appropriate for administrators who want to manage and redirect all CEIP data within the organization.

The Corporate Customer Experience Improvement Program Client-to-Server Protocol is only applicable in environments where all CEIP clients have access to the CEIP server.

1.7 Versioning and Capability Negotiation

None.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2   Messages

2.1   Transport

The Corporate Customer Experience Improvement Program Client-to-Server Protocol uses HTTP [RFC2616] to redirect CEIP data to the specified CEIP server.

Protocol operation is identical regardless of whether the Secure Socket Layers (https) is used.

2.2   Message Syntax

The Corporate Customer Experience Improvement Program Client-to-Server Protocol transmits messages as HTTP POST.

2.2.1   Partner Query String

The Partner Query String includes a text parameter that specifies the actual URL of the CEIP service. The Partner Query String MUST conform to the following HTTP syntax (as specified in [RFC2616], section 3.2.2):

```
PartnerQueryString = "Partner=" Url
Url = 1*CHAR
```

3   Protocol Details

3.1   Client-to-Server Detail

3.1.1   Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

The Corporate Customer Experience Improvement Program Client-to-Server Protocol maintains the following two parameters:

CorporateSQMUrl: The CorporateSQMUrl parameter specifies the URL of the CEIP server. The existence of this parameter instructs the CEIP client that the Corporate Corporate Customer Experience Improvement Program Client-to-Server Protocol will be used.<1>

PartnerQueryString: The PartnerQueryString parameter specifies the URL of the CEIP service, and is contained in the HTTP request to the CEIP server (as specified in section Partner Query String). The CEIP server redirects received data to the CEIP service URL specified in this parameter.

3.1.2   Timers

None.

3.1.3   Initialization

The CEIP client MUST check for the existence of the CorporateSQMUrl parameter. If there is no parameter, or if the parameter is invalid, the CEIP client MUST attempt to send the CEIP data to the CEIP service directly.

The CEIP server MUST check for the existence of the PartnerQueryString parameter in the URL. If there is no parameter, or if the parameter is invalid, the CEIP server SHOULD return a failure response to the CEIP client.

3.1.4   Higher-Layer Triggered Events

None.

3.1.5   Message Processing Events and Sequencing Rules

None.

3.1.6   Timer Events

None.

3.1.7   Other Local Events

Before CEIP data is uploaded, the CEIP client MUST perform the following actions:

1. Construct the URL of the CEIP server with the actual CEIP service URL in the PartnerQueryString.

2. Attempt to upload the CEIP data to the CEIP server using an HTTP POST to the constructed URL. If the CEIP server returns an HTTP success code, the CEIP client MUST NOT attempt to upload the same data again. If the CEIP client receives an HTTP failure code, the CEIP client SHOULD reattempt to upload the data at the next opportunity.

4 Protocol Examples

4.1 Redirection Example

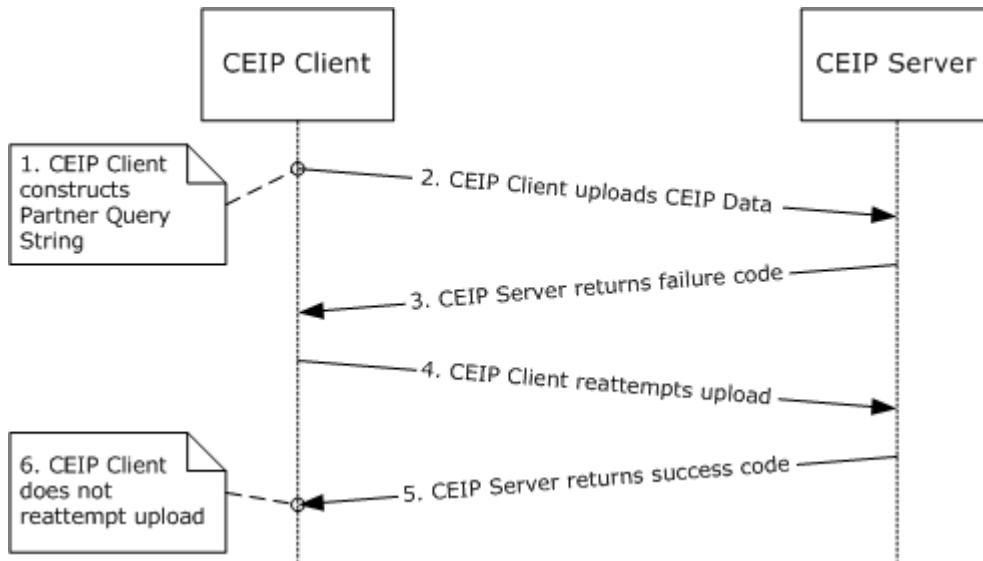This example illustrates the sequence of events that might occur when a CEIP client attempts to redirect CEIP data.

Figure 2: CEIP client redirects CEIP data

1. The CEIP client checks to see whether a CEIP server has been configured. The following value is set.

   ```
   CorporateSQMUrl = http://CEIPServer:1080/
   ```

   The CEIP client adds a query string with the actual service URL to this URL.

   ```
   http://CEIPServer:1080/?partner="https://sqm.microsoft.com/sqm/windows/sqmserver.dll"
   ```

2. The CEIP client uploads the CEIP data using HTTP POST.

3. The CEIP server returns a failure code.

4. The CEIP client reattempts the upload of the CEIP data.

5. The CEIP server returns a success code.

6. Having received a success code, the CEIP client does not reattempt upload of the CEIP data.

Release: Friday, February 4, 2011

5 Security

5.1 Security Considerations for Implementers

None.

5.2 Index of Security Parameters

None.

6   Appendix A: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs:

- Microsoft Windows® 2000 operating system

- Windows® XP operating system

- Windows Server® 2003 operating system

- Windows Vista® operating system

- Windows Server® 2008 operating system

- Windows® 7 operating system

- Windows Server® 2008 R2 operating system

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that the product does not follow the prescription.

<1> Section 3.1.1: In Windows implementations, the CEIP client stores the URL to the CEIP server at the following location.

```
[HKEY_LOCAL_MACHINE\Software\Policies\Microsoft\SQMClient\] "Corporate SQMUrl"
```

7 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

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