

[MS-RDWR]:

Remote Desktop Workspace Runtime Protocol

Intellectual Property Rights Notice for Open Specifications Documentation

- **Technical Documentation.** Microsoft publishes Open Specifications documentation (“this documentation”) for protocols, file formats, data portability, computer languages, and standards support. Additionally, overview documents cover inter-protocol relationships and interactions.
- **Copyrights.** This documentation is covered by Microsoft copyrights. Regardless of any other terms that are contained in the terms of use for the Microsoft website that hosts this documentation, you can make copies of it in order to develop implementations of the technologies that are described in this documentation and can distribute portions of it in your implementations that use these technologies or in your documentation as necessary to properly document the implementation. You can also distribute in your implementation, with or without modification, any schemas, IDLs, or code samples that are included in the documentation. This permission also applies to any documents that are referenced in the Open Specifications documentation.
- **No Trade Secrets.** Microsoft does not claim any trade secret rights in this documentation.
- **Patents.** Microsoft has patents that might cover your implementations of the technologies described in the Open Specifications documentation. Neither this notice nor Microsoft's delivery of this documentation grants any licenses under those patents or any other Microsoft patents. However, a given Open Specifications document might be covered by the Microsoft [Open Specifications Promise](#) or the [Microsoft Community Promise](#). If you would prefer a written license, or if the technologies described in this documentation are not covered by the Open Specifications Promise or Community Promise, as applicable, patent licenses are available by contacting iplg@microsoft.com.
- **License Programs.** To see all of the protocols in scope under a specific license program and the associated patents, visit the [Patent Map](#).
- **Trademarks.** The names of companies and products contained in this documentation might be covered by trademarks or similar intellectual property rights. This notice does not grant any licenses under those rights. For a list of Microsoft trademarks, visit www.microsoft.com/trademarks.
- **Fictitious Names.** The example companies, organizations, products, domain names, email addresses, logos, people, places, and events that are depicted in this documentation are fictitious. No association with any real company, organization, product, domain name, email address, logo, person, place, or event is intended or should be inferred.

Reservation of Rights. All other rights are reserved, and this notice does not grant any rights other than as specifically described above, whether by implication, estoppel, or otherwise.

Tools. The Open Specifications documentation does not require the use of Microsoft programming tools or programming environments in order for you to develop an implementation. If you have access to Microsoft programming tools and environments, you are free to take advantage of them. Certain Open Specifications documents are intended for use in conjunction with publicly available standards specifications and network programming art and, as such, assume that the reader either is familiar with the aforementioned material or has immediate access to it.

Support. For questions and support, please contact dochelp@microsoft.com.

Revision Summary

Date	Revision History	Revision Class	Comments
12/16/2011	1.0	New	Released new document.
3/30/2012	1.0	None	No changes to the meaning, language, or formatting of the technical content.
7/12/2012	1.0	None	Significantly changed the technical content.
10/25/2012	1.0	None	No changes to the meaning, language, or formatting of the technical content.
1/31/2013	1.0	None	No changes to the meaning, language, or formatting of the technical content.
8/8/2013	1.0	None	No changes to the meaning, language, or formatting of the technical content.
11/14/2013	1.0	None	No changes to the meaning, language, or formatting of the technical content.
2/13/2014	1.0	None	No changes to the meaning, language, or formatting of the technical content.
5/15/2014	1.0	None	No changes to the meaning, language, or formatting of the technical content.
6/30/2015	2.0	Major	Significantly changed the technical content.
10/16/2015	2.0	None	No changes to the meaning, language, or formatting of the technical content.
7/14/2016	2.0	None	No changes to the meaning, language, or formatting of the technical content.
6/1/2017	2.0	None	No changes to the meaning, language, or formatting of the technical content.
9/15/2017	3.0	Major	Significantly changed the technical content.

Table of Contents

1	Introduction	5
1.1	Glossary	5
1.2	References	6
1.2.1	Normative References	6
1.2.2	Informative References	7
1.3	Overview	7
1.4	Relationship to Other Protocols	7
1.5	Prerequisites/Preconditions	7
1.6	Applicability Statement	8
1.7	Versioning and Capability Negotiation	8
1.8	Vendor-Extensible Fields	8
1.9	Standards Assignments.....	8
2	Messages.....	9
2.1	Transport	9
2.2	Common Message Syntax	9
2.2.1	Namespaces	9
2.2.2	Messages.....	9
2.2.3	Elements	9
2.2.4	Complex Types.....	9
2.2.5	Simple Types	9
2.2.6	Attributes	9
2.2.7	Groups	10
2.2.8	Attribute Groups.....	10
2.2.9	Common Data Structures	10
3	Protocol Details.....	11
3.1	RDWebServiceSoap Server Details	11
3.1.1	Abstract Data Model.....	11
3.1.2	Timers	11
3.1.3	Initialization.....	11
3.1.4	Message Processing Events and Sequencing Rules	11
3.1.4.1	GetRDPFiles	11
3.1.4.1.1	Messages	11
3.1.4.1.1.1	RDWebService_GetRDPFiles_InputMessage Message	12
3.1.4.1.1.2	RDWebService_GetRDPFiles_OutputMessage Message.....	12
3.1.4.1.2	Elements.....	12
3.1.4.1.2.1	GetRDPFiles	13
3.1.4.1.2.2	GetRDPFilesResponse	13
3.1.4.1.3	Complex Types	13
3.1.4.1.3.1	ArrayOfReconnectContent	13
3.1.4.1.3.2	ReconnectContent.....	14
3.1.4.1.3.3	ReconnectContents	14
3.1.4.1.4	Simple Types	14
3.1.4.1.4.1	ReconnectContentType	15
3.1.5	Timer Events.....	15
3.1.6	Other Local Events.....	15
3.2	RDWebServiceSoap Client Details.....	15
3.2.1	Abstract Data Model.....	15
3.2.2	Timers	15
3.2.3	Initialization.....	16
3.2.4	Message Processing Events and Sequencing Rules	16
3.2.5	Timer Events.....	16
3.2.6	Other Local Events.....	16

4	Protocol Examples	17
4.1	An HTTP post request for data from the web service	17
4.2	A sample of the resources returned	17
5	Security	24
5.1	Security Considerations for Implementers	24
5.2	Index of Security Parameters	24
6	Appendix A: Full WSDL	25
7	Appendix B: Product Behavior	27
8	Change Tracking.....	28
9	Index.....	29

1 Introduction

The Remote Desktop Workspace Runtime Protocol is a Web service-based protocol used to remotely retrieve the contents of the Remote Desktop Protocol (RDP) file that is associated to a user's remote desktop or application-sharing session on a remote computer.

Sections 1.5, 1.8, 1.9, 2, and 3 of this specification are normative. All other sections and examples in this specification are informative.

1.1 Glossary

This document uses the following terms:

Hypertext Transfer Protocol Secure (HTTPS): An extension of HTTP that securely encrypts and decrypts web page requests. In some older protocols, "Hypertext Transfer Protocol over Secure Sockets Layer" is still used (Secure Sockets Layer has been deprecated). For more information, see [\[SSL3\]](#) and [\[RFC5246\]](#).

remote application: An application running on a remote server.

Remote Desktop Protocol (RDP): A multi-channel protocol that allows a user to connect to a computer running Microsoft Terminal Services (TS). RDP enables the exchange of client and server settings and also enables negotiation of common settings to use for the duration of the connection, so that input, graphics, and other data can be exchanged and processed between client and server.

SOAP: A lightweight protocol for exchanging structured information in a decentralized, distributed environment. **SOAP** uses **XML** technologies to define an extensible messaging framework, which provides a message construct that can be exchanged over a variety of underlying protocols. The framework has been designed to be independent of any particular programming model and other implementation-specific semantics. SOAP 1.2 supersedes SOAP 1.1. See [\[SOAP1.2-1/2003\]](#).

SOAP action: The HTTP request header field used to indicate the intent of the **SOAP** request, using a **URI** value. See [\[SOAP1.1\]](#) section 6.1.1 for more information.

SOAP body: A container for the payload data being delivered by a **SOAP message** to its recipient. See [\[SOAP1.2-1/2007\]](#) section 5.3 for more information.

SOAP message: An **XML** document consisting of a mandatory SOAP envelope, an optional SOAP header, and a mandatory **SOAP body**. See [\[SOAP1.2-1/2007\]](#) section 5 for more information.

terminal services (TS): A service on a server computer that allows delivery of applications, or the desktop itself, to various computing devices. When a user runs an application on a terminal server, the application execution takes place on the server computer and only keyboard, mouse, and display information is transmitted over the network. Each user sees only his or her individual session, which is managed transparently by the server operating system and is independent of any other client session.

Uniform Resource Identifier (URI): A string that identifies a resource. The URI is an addressing mechanism defined in Internet Engineering Task Force (IETF) Uniform Resource Identifier (URI): Generic Syntax [\[RFC3986\]](#).

Uniform Resource Locator (URL): A string of characters in a standardized format that identifies a document or resource on the World Wide Web. The format is as specified in [\[RFC1738\]](#).

WSDL message: An abstract, typed definition of the data that is communicated during a **WSDL operation** [\[WSDL\]](#). Also, an element that describes the data being exchanged between web service providers and clients.

WSDL operation: A single action or function of a web service. The execution of a WSDL operation typically requires the exchange of messages between the service requestor and the service provider.

XML: The Extensible Markup Language, as described in [\[XML1.0\]](#).

XML namespace: A collection of names that is used to identify elements, types, and attributes in XML documents identified in a URI reference [RFC3986]. A combination of XML namespace and local name allows XML documents to use elements, types, and attributes that have the same names but come from different sources. For more information, see [\[XMLNS-2ED\]](#).

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

1.2 References

Links to a document in the Microsoft Open Specifications library point to the correct section in the most recently published version of the referenced document. However, because individual documents in the library are not updated at the same time, the section numbers in the documents may not match. You can confirm the correct section numbering by checking the [Errata](#).

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.

[MS-TSWP] Microsoft Corporation, "[Terminal Services Workspace Provisioning Protocol](#)".

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

[RFC2818] Rescorla, E., "HTTP Over TLS", RFC 2818, May 2000, <http://www.rfc-editor.org/rfc/rfc2818.txt>

[SOAP1.1] Box, D., Ehnebuske, D., Kakivaya, G., et al., "Simple Object Access Protocol (SOAP) 1.1", W3C Note, May 2000, <http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>

[SOAP1.2-1/2003] Gudgin, M., Hadley, M., Mendelsohn, N., et al., "SOAP Version 1.2 Part 1: Messaging Framework", W3C Recommendation, June 2003, <http://www.w3.org/TR/2003/REC-soap12-part1-20030624>

[SOAP1.2-2/2003] Gudgin, M., Hadley, M., Mendelsohn, N., et al., "SOAP Version 1.2 Part 2: Adjuncts", W3C Recommendation, June 2003, <http://www.w3.org/TR/2003/REC-soap12-part2-20030624>

[WSDL] Christensen, E., Curbera, F., Meredith, G., and Weerawarana, S., "Web Services Description Language (WSDL) 1.1", W3C Note, March 2001, <http://www.w3.org/TR/2001/NOTE-wsdl-20010315>

[XMLNS-2ED] World Wide Web Consortium, "Namespaces in XML 1.0 (Second Edition)", August 2006, <http://www.w3.org/TR/2006/REC-xml-names-20060816/>

[XMLSCHEMA1] Thompson, H., Beech, D., Maloney, M., and Mendelsohn, N., Eds., "XML Schema Part 1: Structures", W3C Recommendation, May 2001, <http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/>

[XMLSCHEMA2] Biron, P.V., Ed. and Malhotra, A., Ed., "XML Schema Part 2: Datatypes", W3C Recommendation, May 2001, <http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/>

1.2.2 Informative References

[MS-RDPBCGR] Microsoft Corporation, "[Remote Desktop Protocol: Basic Connectivity and Graphics Remoting](#)".

[MSDN-TSCCRDP] Microsoft Corporation, "Terminal Services Client Configuration through the .rdp File", <http://msdn.microsoft.com/en-us/library/aa915001.aspx>

1.3 Overview

The Remote Desktop Workspace Runtime Protocol retrieves **Remote Desktop Protocol (RDP)** files, as described in [\[MSDN-TSCCRDP\]](#), that are required to reestablish connections to a user's session(s) on a remote server(s). The protocol returns the number of resources that corresponds to the number of connected and disconnected sessions the user has in the deployment. In addition, the type of session (desktop, remote application, or virtual machine (VM)) and the RDP file for reconnecting are returned. In order to reconnect the sessions, the presence of the **Terminal Services** client is required to launch the application, and the Terminal Services client will use the RDP protocol [\[MS-RDPBCGR\]](#) to connect.

1.4 Relationship to Other Protocols

The Remote Desktop Workspace Runtime Protocol uses **SOAP** over **Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)**, as specified in [\[RFC2818\]](#).

The following diagram illustrates the layering of the protocol stack.

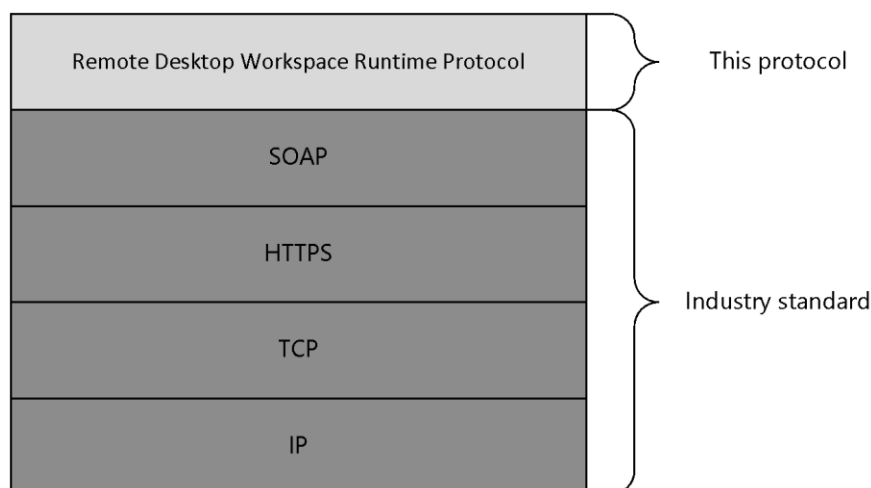


Figure 1: Protocol Stack

1.5 Prerequisites/Preconditions

The following are prerequisites for the operation of the Remote Desktop Workspace Runtime Protocol:

- The Remote Desktop Workspace Runtime Protocol does not provide a mechanism for a client to discover the **Uniform Resource Locator (URL)** to the server; consequently, the client requires a valid URL to the server.
- The client machine has the necessary applications to launch any of the **Remote Desktop Protocol (RDP)** configuration files [\[MSDN-TSCCRDP\]](#) returned by the protocol. For example, the **Terminal Services** client is required to launch the application or desktop and will use the RDP protocol [\[MS-RDPBCGR\]](#) to connect.

- Both client and server implementations of the Remote Desktop Workspace Runtime Protocol are present and running.
- The Remote Desktop Workspace Runtime Protocol uses the authentication model based on [\[MS-TSWP\]](#). For example, the re-use of the authentication cookie negotiated prior to this protocol starting, as described in [\[MS-TSWP\]](#) section 3.1.1.1.

1.6 Applicability Statement

The use of the Remote Desktop Workspace Runtime Protocol is appropriate when the client requires the resource files required to reconnect to the user's remotely connected sessions. These resources represent the remote applications and or desktops that are associated to the user, in the form of RDP file contents.

1.7 Versioning and Capability Negotiation

The Remote Desktop Workspace Runtime Protocol defines a version field to facilitate the process of identifying the protocol version.

1.8 Vendor-Extensible Fields

The Remote Desktop Workspace Runtime Protocol does not define any vendor-extensible fields.

1.9 Standards Assignments

XML namespaces used by **SOAP**-based protocols are listed in section [2.2.1](#).

2 Messages

2.1 Transport

The Remote Desktop Workspace Runtime Protocol uses **SOAP** over HTTPS for communication. The Remote Desktop Workspace Runtime Protocol is used as the transport to provide access to the user's RDP file contents that are associated with their active **remote application** sessions and/or remote desktop sessions.

2.2 Common Message Syntax

This section contains common definitions used by this protocol. The syntax of the definitions uses XML Schema, as defined in [\[XMLSCHEMA1\]](#) and [\[XMLSCHEMA2\]](#), and Web Services Description Language, as defined in [\[WSDL\]](#).

2.2.1 Namespaces

This specification defines and references various **XML namespaces** using the mechanisms specified in [\[XMLNS-2ED\]](#). Although this specification associates a specific XML namespace prefix for each XML namespace that is used, the choice of any particular XML namespace prefix is implementation-specific and not significant for interoperability.

Prefix	NameSpaces URI	Reference
soap	http://schemas.xmlsoap.org/wsdl/soap/	[SOAP1.1]
xsd	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA1] , [XMLSCHEMA2]
soap12	http://schemas.xmlsoap.org/wsdl/soap12/	[SOAP1.2-1/2003] , [SOAP1.2-2/2003]
tns	http://schemas.microsoft.com/ts/2010/09/rdweb	
wsaw	http://www.w3.org/2006/05/addressing/wsdl	
wsdl	http://schemas.xmlsoap.org/wsdl/	[WSDL]

2.2.2 Messages

This specification does not define any common XML schema message definitions.

2.2.3 Elements

This specification does not define any common XML schema element definitions.

2.2.4 Complex Types

This specification does not define any common XML schema complex type definitions.

2.2.5 Simple Types

This specification does not define any common XML schema simple type definitions.

2.2.6 Attributes

This specification does not define any common XML schema attribute definitions.

2.2.7 Groups

This specification does not define any common XML schema group definitions.

2.2.8 Attribute Groups

This specification does not define any common XML schema attribute group definitions.

2.2.9 Common Data Structures

This specification does not define any common XML schema data structures.

3 Protocol Details

3.1 RDWebServiceSoap Server Details

The following sections describe the behavior of the Remote Desktop Workspace Runtime Protocol. This protocol follows a client-server model, whereby a client sends a **SOAP message** that contains a request (a GetRDPFiles operation) to the server, and the server responds with a SOAP message that contains the response.

The following sections describe the behavior of the Remote Desktop Workspace Runtime Protocol.

3.1.1 Abstract Data Model

None.

3.1.2 Timers

None.

3.1.3 Initialization

When this protocol initializes, it **MUST** begin listening for **SOAP** requests using the standard SOAP protocol and ports.

3.1.4 Message Processing Events and Sequencing Rules

This specification includes the following **WSDL operations**.

WSDL Operation	Description
GetRDPFiles	Retrieves an array of resources.

3.1.4.1 GetRDPFiles

A server processes a GetRDPFiles request using the Remote Desktop Workspace Runtime Protocol upon receiving a **SOAP message** that contains the specified **Uniform Resource Identifier (URI)** as the **SOAP action**:

```
soapAction="http://schemas.microsoft.com/ts/2010/09/rdweb/GetRDPFiles"
```

This operation is specified by the following WSDL.

```
<wsdl:operation name="GetRDPFiles">
  <wsdl:input wsaw:Action="http://schemas.microsoft.com/ts/2010/09/rdweb/GetRDPFiles"
    name="RDWebService_GetRDPFiles_InputMessage"
    message="tns:RDWebService_GetRDPFiles_InputMessage"/>
  <wsdl:output wsaw:Action="http://schemas.microsoft.com/ts/2010/09/rdweb/GetRDPFiles"
    name="RDWebService_GetRDPFiles_OutputMessage"
    message="tns:RDWebService_GetRDPFiles_OutputMessage"/>
</wsdl:operation>
```

3.1.4.1.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
RDWebService_GetRDPFiles_InputMessage	Contains a GetRDPFiles element. A message MUST NOT contain anything in the SOAP body .
RDWebService_GetRDPFiles_OutputMessage	The response to a GetRDPFilesSoapIn message, which contains a GetRDPFilesResponse element. A message that either MUST NOT contain anything if no resources are available to connect to or MUST contain resource-specific XML in the SOAP body for resources to connect to.

3.1.4.1.1.1 RDWebService_GetRDPFiles_InputMessage Message

A **WSDL message** containing the request for **GetRDPFiles WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/ts/2010/09/rdweb/GetRDPFiles
```

The **SOAP body** contains **GetRDPFiles** element.

```
<wsdl:message name="RDWebService_GetRDPFiles_InputMessage">
  <wsdl:part name="GetRDPFiles" element="tns:GetRDPFiles"/>
</wsdl:message>
```

The GetRDPFilesSoapIn message contains a GetRDPFiles element, as specified in section [3.1.4.1.2.1](#).

3.1.4.1.1.2 RDWebService_GetRDPFiles_OutputMessage Message

A **WSDL message** containing the response for **GetRDPFiles WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/ts/2010/09/rdweb/GetRDPFiles
```

The **SOAP body** contains **GetRDPFilesResponse** element.

```
<wsdl:message name="RDWebService_GetRDPFiles_OutputMessage">
  <wsdl:part name="GetRDPFilesResponse" element="tns:GetRDPFilesResponse"/>
</wsdl:message>
```

The GetRDPFilesSoapOut message contains a GetRDPFileResponse element in response to a GetRDPFilesSoapIn message. The GetRDPFileResponse element is specified in section [3.1.4.1.2.2](#).

3.1.4.1.2 Elements

The following table summarizes the **XML** schema element definitions that are specific to this operation.

Element	Description
GetRDPFiles	Forms the body of GetRDPFiles request. An empty type that is used when making the request for RDP files.

Element	Description
GetRDPPFilesResponse	Contains the response to a GetRDPPFiles request. The overall container that defines the protocol configuration.

3.1.4.1.2.1 GetRDPPFiles

The GetRDPPFiles element forms the body of the request. This element contains no child elements and conveys no information.

```
<xsd:element name="GetRDPPFiles" nillable="true">
  <xsd:complexType/>
</xsd:element>
```

3.1.4.1.2.2 GetRDPPFilesResponse

The GetRDPPFilesResponse contains the response to a GetRDPPFiles request.

```
<xsd:element name="GetRDPPFilesResponse" nillable="true">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element minOccurs="1" maxOccurs="1" name="GetRDPPFilesResult" nillable="true"
type="tns:ReconnectContents"/>
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
```

GetRDPPFilesResult:

GetRDPPFilesResult is a complex type that contains a container called ReconnectContents types. The ReconnectContents container is described in section [3.1.4.1.3.3](#). GetRDPPFilesResult contains the complex data type ReconnectContents.

The GetRDPPFileResponse MUST contain at least one GetRDPPFilesResult.

3.1.4.1.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

ComplexType	Description
ArrayOfReconnectContent	The container for the ReconnectContent complex type.
ReconnectContent	Used to contain the remote desktop file stream and type of resource defined.
ReconnectContents	The container that defines the version and array of contents received by the web server.

3.1.4.1.3.1 ArrayOfReconnectContent

ArrayOfReconnectContent is a complex type that specifies the collection of ReconnectContent types, as specified in section [3.1.4.1.3.2](#).

Namespace: <http://schemas.microsoft.com/ts/2010/09/rdweb>

```
<xsd:complexType name="ArrayOfReconnectContent">
```

```

    <xsd:sequence>
      <xsd:element minOccurs="0" maxOccurs="unbounded" name="ReconnectContent" nillable="true"
type="tns:ReconnectContent"/>
    </xsd:sequence>
  </xsd:complexType>

```

ReconnectContent: A collection of ReconnectContent types.

3.1.4.1.3.2 ReconnectContent

ReconnectContent has a string element that contains the RDP file stream, and a simple type called ReconnectContentType that is used to specify the type of RDP file stream. ReconnectContentType is specified in section [3.1.4.1.4.1](#). The RDP file stream consists of RDP files as described in [\[MSDN-TSCCRDP\]](#).

Namespace: <http://schemas.microsoft.com/ts/2010/09/rdweb>

```

<xsd:complexType name="ReconnectContent">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="rdpStream" nillable="true"
type="xsd:string"/>
    <xsd:element minOccurs="1" maxOccurs="1" name="rct" type="tns:ReconnectContentType"/>
  </xsd:sequence>
</xsd:complexType>

```

rct: ReconnectContentType is specified in section 3.1.4.1.4.1.

rdpStream: A file stream that consists of RDP files as described in [\[MSDN-TSCCRDP\]](#).

3.1.4.1.3.3 ReconnectContents

The ReconnectContents type has a version string element and either zero or one type of ArrayOfReconnectContent type. The ArrayOfReconnectContent type is specified in section [3.1.4.1.3.1](#).

Namespace: <http://schemas.microsoft.com/ts/2010/09/rdweb>

```

<xsd:complexType name="ReconnectContents">
  <xsd:sequence>
    <xsd:element minOccurs="0" maxOccurs="1" name="version" nillable="true"
type="xsd:string"/>
    <xsd:element minOccurs="0" maxOccurs="1" name="wkspRC" nillable="true"
type="tns:ArrayOfReconnectContent"/>
  </xsd:sequence>
</xsd:complexType>

```

version: A complex type that contains a string to represent versioning of the Remote Desktop Workspace Runtime protocol. Define a value in this operation when it is implemented.

wkspRC: An element of type ArrayOfReconnectContent.

3.1.4.1.4 Simple Types

The following table shows the Simple types included in the operation.

SimpleType	Description
ReconnectContentType	An enumerated type to indicate whether the user's resource is remote desktop, remote

SimpleType	Description
	application, or virtual machine-based.

3.1.4.1.4.1 ReconnectContentType

The valid values for this enumeration are "REMOTEDESKTOP", "VMREMOTEDESKTOP", or "REMOTEAPPLICATION".

Namespace: http://schemas.microsoft.com/ts/2010/09/rdweb

```
<xsd:simpleType name="ReconnectContentType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="REMOTEDESKTOP"/>
    <xsd:enumeration value="VMREMOTEDESKTOP"/>
    <xsd:enumeration value="REMOTEAPPLICATION"/>
  </xsd:restriction>
</xsd:simpleType>
```

The following table specifies the allowable values for **ReconnectContentType**.

Value	Meaning
REMOTEDESKTOP	Specifies a session type of remote desktop.
VMREMOTEDESKTOP	Specifies a session type of virtual machine.
REMOTEAPPLICATION	Specifies a session type of remote application.

3.1.5 Timer Events

None.

3.1.6 Other Local Events

None.

3.2 RDWebServiceSoap Client Details

The client side of this protocol is simply a pass-through. That is, no additional timers or other state is required on the client side of this protocol. Calls made by the higher-layer protocol or application are passed directly to the transport, and the results returned by the transport are passed directly back to the higher-layer protocol or application.

3.2.1 Abstract Data Model

None.

3.2.2 Timers

None.

3.2.3 Initialization

None.

3.2.4 Message Processing Events and Sequencing Rules

None.

3.2.5 Timer Events

None.

3.2.6 Other Local Events

None.

4 Protocol Examples

4.1 An HTTP post request for data from the web service

The following is a request and response operation for RDP files resources.

```
POST /RDWeb/myWeb/rdwebservice.asmx HTTP/1.1
Host: localhost
Content-Type: text/xml; charset=utf-8
Content-Length: length
SOAPAction: "http://schemas.microsoft.com/ts/2010/09/rdweb/GetRDPFiles"

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <GetRDPFiles xmlns="http://schemas.microsoft.com/ts/2010/09/rdweb" />
  </soap:Body>
</soap:Envelope>
HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <GetRDPFilesResponse xmlns="http://schemas.microsoft.com/ts/2010/09/rdweb">
      <GetRDPFilesResult>
        <version>string</version>
        <wkspRC>
          <ReconnectContent>
            <rdpStream>string</rdpStream>
            <rct>REMOTEAPPLICATION or REMOTEDESKTOP or VMREMOTEDESKTOP</rct>
          </ReconnectContent>
          <ReconnectContent>
            <rdpStream>string</rdpStream>
            <rct>REMOTEAPPLICATION or REMOTEDESKTOP or VMREMOTEDESKTOP</rct>
          </ReconnectContent>
        </wkspRC>
      </GetRDPFilesResult>
    </GetRDPFilesResponse>
  </soap:Body>
</soap:Envelope>
```

4.2 A sample of the resources returned

The request in section [4.1](#) is made and the return is an xml payload consisting of three resources (RDP file streams) that are associated to the user's remote desktop session, remote application session, or virtual machine.

```
<?xml version="1.0" encoding="UTF-8"?>
<ReconnectContents xmlns="http://schemas.microsoft.com/ts/2010/09/rdweb"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <version>8.0</version>
  <wkspRC>
    <ReconnectContent>
      <rdpStream>redirectclipboard:i:0 redirectprinters:i:0 redirectcomports:i:1
redirectsmartcards:i:0 devicestoredirect:s: drivestoredirect:s:* redirectdrives:i:1 session
```

[MS-RDWR] - v20170915
Remote Desktop Workspace Runtime Protocol
Copyright © 2017 Microsoft Corporation
Release: September 15, 2017

```

AvAlBR8GgZ6/snLurFl8bX0w0c5om/bQ51E0t6wPgjlitP41zokkwc9xubTgBb81
jp0+J1SgSzJoDlqfRsteafy/MiMlVNVfoShn35Gos9wmZQIDAQABo4IF1DCCBdAw
IwYDVR0fBBwwGjAYoBoGEEYYPZmlsZTovL3Rlc3QuY3JsgQEAMAwGA1UdEwQFMAMC
AQAwCwYDVR0PBAQDAgQwMBMGA1UdJQQMMAoGCCsGAQUFBwMBMBMGA1UdJQQMMAoG
CCsGAQUFBwMDMDUGA1UdBwQuMCYCK1JEVki5LTEwMTE4NC5yZH0ZWftLnN0YnRl
c3QubWljcm9zb2Z0LnNvbTA1BgNVHREELjAsqipSRFZCOS0xMDExODQucmR2dGVh
bS5zdGJ0ZXN0Lm1pY3Jvc29mdC5jb20wggtTBG8rBgEEAYI3E4L4fZ4ajUwEEggS+
MIIEugQIU1NMVGvZdAAEBNzhbG1kAAIBBAIBAQQITgBVAEwATAAEggSUBwIAAAck
AABSU0EyAAgAAAEAAQBlJtyzjphf5yGhX9Vui4kww/xpXstGnloPaDKzoFQnPP2O
Nb8F4LS5cc9ZJInONF60YjmCD6y3NFHn0PabaM7RMH1tfFms7nKyv56BBh8FJfAC
R9tpworABC5nhlMoHyqj+zeJpy606190LcymOxEUC/DNVBezgmPuxXLaNjbimUpo
ELpFlU2Lns3190876y+vhO+1zJgVvpnp1Cn69P0kq7yptIVJcD4yrTkhhLiVLN5O
F73ScmIThN+AIv1XwFaWbhaqM3bEOc2ZNZBgg+0y6kDEwM+fRL/i6qnn8OBcBltm
+ZykuNzpyY9VELliLxPn9e3dsyYjBmNlPwqPnOOGe7R0OUsrYkiqVvNWDi+4qbfr
yIkWgAnNx3qxUeBnrigL0948NHP6qHJuqiulfz4yU/tbhlDlKJ0u2UziMhI5m66j
LI2UU2b4x9LopuVcn08cVtWtmw7BCRJZsO3/VO751yAtDHc+QLQ39rp846nE50+u
JvZW6BU6/hYl1ZT+gtCnWmT+Ixurl/r++4OOSgMiAtjR9liFdsoEN6LJwGzx+wFy
Tt7P1OdHeLSiVir+6CUodaAFs+tfGDTosjsduT9wFRm8i83EXTu7xFwhGJZKgGsU
vl6waYIsJZs+QZx/plWtUNGMI3jyEvl6qGeloYpjmseTy0V86grxFyKZIAuIxeul
EvAm6blqD/btM0YMFZ8RNk7in8Oj1BfZyO0f5kMvgBASipOvxGMcpnOmBsXKVpb8
ZBI+K7Ewdkjq+W9ViatqO/6Qj9rVu5I5aWAPUoyxy3IF1E3yRs4pvPmNZzxpEhl/
dG19wlebHcZ5y3c2fH2lyRHPcPdnBOGFLm/N2Z4qK50tekuuH1k+xB4qY
leZrC7sDVnPl28CroKI4G9SM8OSkPikKsrP34BcoGRoTFpeKkBAk5fQOUbqUZit
sVImrLLeXBexl19l84YBkf8rLaFWajFK+p1H68qBRfK0svCpUWhBtiqc447qtCYj
WrWUph6yt+orXmkzfuiKLcdJlWJfb2t4JxwQf8OJWKxIKfVZy+aOk4BaB57PyC3o
M/JRdxkciZnD9nD4aMBiJNcgnsdnDm9ZhWUX1sMQKQwqvG7g4YGBWwG+8Zjv
99NT+V3Sw/LUBG7tjsAnPzJYG0Y6prwF749+M2FnBBOZWdIrACT7izOGKEcPxWT
LnKFu7PSksomly7cq5NskYD8bamcmxSIS7jwav/BLuTRGV5EWvGeM8eUfDkxQRRRI
OW3IDw0HjD6VYVnJyHs7q+XkNJsSBPRqD9mGgFfTjtyOhwHmLrIDwIjZIr54XqlT
8f7Dj4P5vPcUZhtOHC+00ZE1mp7tODHX191uotAiPKSa3zH5S0kP93hOwepoZYhn
rJNDDLpSk0rzyPZeg5F0W4ZmNv3YrLQ47RdoZbOPBu+U5yyD2001bHlRli56NJgr
NsZMKnwX/Zghl/Yb9mge+JebqUmxCFGrNTw7gIyXc3LS2CCVQLPcjTa5RjoaUobj
bAzFh6uMUZaTUXKVU48wHwYDVR0jBBGwFoAUKMnouHlh+66LZcePcoKz8gNBGe4w
DQYJKoZIhvcNAQEFBQAQADggEBAIIBdFJe+7TwikFEdvYJmKBeGisESQU3qIR8KBjC
+EjuCwa2kEnh2H8MdEK1YAuchPjYFCwIo3RRb72HTEab9/K0G1LuLiHEG6QJPO8U
8nE7vLncBCKVZ3RsoZnqwZBYXq7cGxOIOMeEbnB5z6IZUgqhwn1VxxfEz0eM2yw8
GGymBseh5F+PSCd6m8Xwfpv++MLymAFnYAASVlFviH+ZohNKPvpr7LAE6M1B6UFT
LlSjDg+te1NAJG1PoEQlLlYNIkwIMo7fyJyA2QFFcHHW00X+kdZK62LK61UAMYTi
MOMhs3XonNVUkzMPILVnC/W4WvgChZF14dA9dNknm0WIEp8xggFOMIIBSgIBATAN
MBMxETAPBgNVBAMTCFNTTCBsb290AhCwk27ipHlCr02ufWa7Sv3pMAkGBSsOAwIa
BQAwdQYJKoZIhvcNAQEBBQAEGgEARg6AoNGE/Fgl6ohkHCT+AirvjbLSELtfb62m
MBkmwGGL4M6GsM7x/pnhMrE1iGMxy910c/wdv0hojRhLo43DEdu/sQ0GgIkzFOFu
C1gmLu88wUp7L45o7lWtrhwOWwsjMVskbj//5XGrQ9dJnFb2s0cFhtCTEkKuXMRA
dSPn0YFHS2Uzk6hhNMmJlQ1+jLEJy5mFAodljHAJrdwaQcE7TtwP5jh0zntUbKFE6
1z26UTmt4V61+Z/eqwtPvcAyibgUwVl80TayNsbmUd7fqVDPVa09D+Pn4k1pEzfr
5dEvdHbLSCHbB7zrlYUh7KGsDCftNm7EIJZWxzobnGwB6RAJsg==
</rdpStream>
<rct>REMOTEDESKTOP</rct>
</ReconnectContent>
<ReconnectContent>
<rdpStream>redirectclipboard:i:0 redirectprinters:i:0 redirectcomports:i:1
redirectsmartcards:i:0 devicestoredirect:s: drivestoredirect:s:* redirectdrives:i:1 session
bpp:i:32 prompt for credentials on client:i:1 server port:i:3389 allow font smoothing:i:1
promptcredentialonce:i:1 authentication level:i:0 gatewayusagemethod:i:2
gatewayprofileusagemethod:i:0 gatewaycredentialssource:i:0 full address:s:RDVB9-
101180.rdvteam.stbtest.microsoft.com workspace id:s:RDVB9-
101180.rdvteam.stbtest.microsoft.com use redirection server name:i:1
loadbalanceinfo:s:tsv://MS Terminal Services Plugin.1.RDVB9-101180 use multimon:i:0 alternate
full address:s:RDVB9-101180.rdvteam.stbtest.microsoft.com signscope:s:Full Address,Alternate
Full Address,Use Redirection Server Name,Server
Port,GatewayUsageMethod,GatewayProfileUsageMethod,GatewayCredentialsSource,PromptCredentialOn
ce,Authentication
Level,RedirectDrives,RedirectPrinters,RedirectCOMPorts,RedirectSmartCards,RedirectClipboard,D
evicesToRedirect,DrivesToRedirect,LoadBalanceInfo signature:s: Full Address,Alternate Full
Address,Use Redirection Server Name,Server
Port,GatewayUsageMethod,GatewayProfileUsageMethod,GatewayCredentialsSource,PromptCredentialOn
ce,Alternate
Shell,RemoteApplicationProgram,RemoteApplicationMode,RemoteApplicationName,RemoteApplicationC
mdLine,Authentication

```

Level,RedirectDrives,RedirectPrinters,RedirectCOMPorts,RedirectSmartCards,RedirectClipboard,D
evicesToRedirect,DrivesToRedirect,LoadBalanceInfo
signature:s:AQABAAEAAAAEgAAMIISFQYJKoZIhvcNAQcCoIISBjCCEgICAQExCzAJBgUrDgMC
GgUAMAsGCSqGS1b3DQEBBQAACEI8wggfFMIIGx6ADAgECAhBfZzkIP2oDi06PGDo+
oaFJMA0GCSqGS1b3DQEBBQUAMBMxETAPBgNVBAMTCFNTTCBSb290MCAAXDTkwMDEw
MTAwMDAwMFOYDzIwOTAxMjMxMDAwMDAwWjATMREwDwYDVQQDEWhTU0wgUm9vdDCC
ASiWdQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBAKBSnjeWWYGMhQa1IGbdeKbC
otl4+TeYARdNAlSIXORd42ohMtR+owHtFAkY4zeanTZW00vp6erI8osVvSv6jL4
Wf8WQ6qoNPK9WsHb3QbfcCXvq+EzRpiVbr+JF9OYsC2cuq3ZlW/3FnE7jWcbGON5
DbXCTe6mHbpdGgnq2oG7PsU3rq+EBw8sIvPRegofdEns8GM8Dys+eYbCW4o7+EDy
rtaqRuCnjZX5mdmdHIunlD4kzeVv5dFqoZoU5HMBIPpK+Dl56+vZrQy6jyKkEqA
wlzqBhqVHzXWv9+uYyFjsX82tRr6x3YnVnh5sdH+CMvpLKsr0fhvwe1Ocq3HCvMC
AwEAAaOCBsswggUNMAwGA1UdEwQFMAMBAf8wggTVBg8rBgEEAYI3E4LfZ4ajUwEE
ggTAMIIEvAQIU1NMVGvdAAECFNTTFJvb3QAAGEBAGECBAhOAFUATABMAASCBJQH
AgAAACQAAFJTQTIACAAAAQABAPMKx61yTu3Bb/jRK6ss6csI/tGxeXhWJ3bH+hq1
Nn+x4ydr+1/jUfrxoG6l2DgEqQijzqMrRmr6/n9eAr6fMgAXPkFJqhatH1b+XN
JD6Up4scndmZ+ZWNp+BGqtau8kd404pbwoZ5PisPPGPw7E10Hwp60fMiLA8HhK+u
NBu+u4Ha6pCQ7odpK6wrUn+ekYG2eNO3EW9w8j2a26nc2wmNMxiB9lZhGM+Gr
7yVw3wbd28FavfI0qKpDFv9Z+DLqr/RWLMOjq6enL+1Y2XRq3oxjJFC0B4z6UcuE
qIOPq3MhElSCTRCBmDF5eN2iWkYS3WYgtQaFjIFZ1jeeUqBw57B47bG5/MuF5eq
COGYcQakeZDB8K03526kln923CqVuWIw7XfTe3ayv1HP+4VhPlol/pII4OAdsVK
NjfuHT/47UabRsmyzTiSCGL/mwGKEVxKxjI5ZLH8lqpb2j/JuhZt2Kd7FLpBHg1Y
3unPcdMBx7BI18kjRaqVuTmY0u1U7xCewvNjC4O5VckPXukfMo5PadzhAHOp5QoM
u6Li3yipTGGT7tFfcoKwAMFf+adtX364x6Tr18EzJHgjAQtvsZ8uegqoymUNffz+
6fFp2gjKiHu0F4+GL4IiYQ9cijZNB8cz33MdlXCgBCEGUYcG3u18iBioXBL02tBF
ouPCW2l/8zKq+DQp2LoBjVWkbbL7pw8dXzSUROWiuaTJnzQ+MQNc9sCc4FJPFyJJ
ANWa0q17FN/5Skc3TU64G0StHnBudaFdf7V82ZYGWkyB3fz8UNpmkOirxmyLpQQ7
WlckYfqMiR5rZEBkGjPbkKcIEJBUC3UFznNgMGOLENm18DlReWgN0kNIMH4896mS
B6B9kn2ywc1POMAE8DeBX6FzR13rbLKakm8CuTo7arS6nw/OuV1xKkOAMNvgUwFJ
g6fGgbjXxQgePIbMXgXqFwXhLkqy/3sVkmW5C4sSQShuOweWdtg6H6uKnE90OHYq
k9FGBZ1F6bYyrTaxo6mObxDkrg5AZLgfp03UYdYADbghMG8oWP5W0wUYEXtH9B0H
VO9ZXXg4nr11fmII2tGY0Hhe6hSyynpkROaE6VI18DOKJ14G1912YY95aUb0yY4b
xcFrQf63P72PSPS1ZAUBlo+UsZ1/XfMvJjYiIvKc+wQ80tG0V124hfhcTDpiuNJ4
h/aMKdYwocvYhUGrC/yL5juBUhUB3x771V8qZjb7wF46f9s0azbAf22XktqIC0
GFYEknWorlkiXYMW3DWFVpCd+2YB0c5jGrLivmdQtXcbx7AzcharSknUmVWfRUgC
u8aTcVew+6b1Xs1JBsB2vdMPUB/QEZVtQiFfQWtOymxQEVqnZ9B60LBzY00ztKjC
f+bNS2Lj/wo3vfQuEK0CuHLwmDTjr4Z/9ndy4u6PY0xDO9+pgLaWiHvZpkG12M3g
myN+XvtRDT101z7YdA96ur6xSWKcZyJPhYSOC0xm2nq/pBknoS585MbixyWQuldg
MWhHnWNg0VTBV73zqkiQNmzBJDAdbGNVHQ4EFgQUKMnouHlh+66LZcePcoKz8gNB
Ge4wHwYDVR0jBBgwFoAUKMnouHlh+66LZcePcoKz8gNBGe4wDQYJKoZIhvcNAQEF
BQADggEBAEKDDekZEnl+ZO5IckEzk5BuIwTD9ht/1SSIectM0+tdhJqjLuTcoU6
d/DZ0OREQbvfE3ketQ9fHcy+leiCigD2g0YxnfNctFxpoldPbbG1LiIyupUHZNBM
mKriwTpXNhaEw1wysJBI9brzB1cOrrGK9Eilo48QLmqPeb4eMrW+h0PFjunaa+kR
NABQOfoxzwwg32T15z03dTLm59zL/qLvYRS7pDIFGjw4FdbdRhHDSYJv4CSzxcNpd
GCmwRLAs92fKT59JBI7DWT0zezZPXxf0aAjqfWNWjLgdNedIKcbN0DAbEzBLQvD
xKx2rJseV4iBo28tzGg8+c80fqInoxswggioMIHhKADAgECAhCwk27ipHLCr02u
fWa7Sv3pMA0GCSqGS1b3DQEBBQUAMBMxETAPBgNVBAMTCFNTTCBSb290MB4XDTE
MDIwMzAxMDIzMDI0XDTExMDgwMzAxMDIzMDI0NTEzMDEGA1UEAxMqUkRWQjktMTAx
MTg0LnJkdnlrYW0uc3RidGVzdC5taWNyb3NvZnQuY29tMIIBIjANBgkqhkiG9w0B
AQEFAAOCAQ8AMIIBCgKCAQEAoOocj2o9ZWMG8iiz3e315xMvolgSVY/J6dy4pJz5
ZlsGXODw56nq4r9En8/AxEqMu2DYJA1mc05xHYZqhZullbAV1khgN+EE2Jy0rOX
Tt4slbiEITmtMj5wSYW0qbyrppP0+inU6Zm+FZhkte+Ery/rO+/09c2ei02VRboQ
aEox4jY22nLF7mOCsxdUzFzFBE7pswtTl/qji6niTf7oyoFkFOGZy4EwIrCadH
AvAlBR8GgZ6/snLurF18bX0w0c5om/bQ51E0t6wPgjlitP41zokkwc9xubTgBb81
jp0+J1SgzsJoD1qfRsteafy/MiMhLVNVfoSHn35Gos9wmZQIDAQABo4IF1DCCBdAw
IwYDVR0fBBBwGjAYoBOgEYYPZmlsZTovL3Rlc3QuY3JsgQEAMAwGA1UdEwQFMAMC
AQAwCwYDVR0PBAQDAgQwMBMGA1UdJQQMMAoGCCsGAQUFBwMBMBMGA1UdJQQMMAoG
CCsGAQUFBwMDMDUGA1UdBwQuMCYCK1JEVkiI5LTEMTE4NC5yZH0ZWFTLnN0YnRl
c3QubWl1cm9zb2Z0LmNvbTA1BgNVHREELjAsqipSRfZCOS0xMDExODQucmR2dGVh
bs5zdGJ0ZXN0Lm1pY3Jvc29mdC5jb20wggTtBg8rBgEEAYI3E4LfZ4ajUwEEggS+
MIIEugQIU1NMVGvdAAEBNzhbG1kAAIBBAIBAQQITgBVAEwATAAEggSUBwIAAACk
AABSU0EYAAgAAAEAAQBlJtyzjphf5yGhX9Vui4kwv/xpXstGnloPaDKzoFQnPP2O
Nb8F4LS5cc9ZJYNBF60YjmcCD6y3NFHnOPabaM7RMH1tFfms7nKyv56BBH8FJfAC
R9tpworABC5nhlMoHyqj+zeJpy60619OLcymOxEUC/DNVBezgmPuxXLaNjbiMUpo
ELpFlU2Lns3190876y+vhO+1ZJgVvpnp1Cn69P0kq7yptIVJcD4yrTkhhlLiVLN5O
F73ScmIThN+AIv1XwFaWbhaqM3bEOc2ZNZBgg+0y6kDEwM+fRL/i6qnn8OBcBltm
+ZykuNzpyY9VELi1PwPn9e3dsyYjBmN1PwqPnOogE7R0OUsrYkiqVvNWDi+4qbr
yIkWgAnNx3qxUeBnrigL0948NHP6qHJuqu1fz4yU/tbhlD1KJ0u2UziMhI5m66j
LI2UU2b4x9LopuVcno8cVTwTmw7BCRJZsO3/VO751yAtDHc+QLQ39rp846nE50+u
JvZW6BU6/hY1IZT+gtCnWmt+Ixur1/r++4OOSgMiAtJR9liFdsoEN6LJwGzx+wFy

```
Tt7P10dJeLSiVir+6CUodaAFs+tfGDT0SjsduT9wFRm8i83EXTu7xFwhGJZKgGsU
v16waYIsJZs+QZx/plWtUNGMI3jyEvl6qGeloYpjmseTy0V86grxFyKZIAuIxeul
EvAm6b1qD/btM0YMFZ8RNk7in8Oj1BfZy00f5kMvgBASipOvxGMcpnOmBsxKVpb8
ZBI+K7EWDkjq+W9ViatqO/6Qj9rVu5I5aWAPUoyxy3IF1E3yRs4pvPmNZzxpEh1/
dG19wleHQZY3c21mNI4G9SM8OSkPikKsrP34BcoGRoTFpeKkBAk5fQOUbqUZit
sVImrLLeXbexlI9l84YBkf8rLaFWajFK+p1H68qBRfK0svCpUWhBtiqc447qtCYj
WrwUph6yt+orXmzkfiuKlCdJ1WJfb2t4JxwQf80JWKxIKfVzy+aOk4BaB57PyC3o
M/JRdxkCizW7G0W49nD4aMBiJNcgnsdnDm9ZhWUX1sMQKQwqvG7g4YGBWwG+8Zjv
99NT+V3Sw/LUbG7tjsAnPzJYG0Y6prwF749+M2FnBBOZWwdIrACT7izOGKEcPxWT
LnKFu7PSksomly7cq5NskYD8bamcmxSIS7jwav/BLuTRGV5EWvGeM8eUfDkxQRRi
OW3IDw0HjD6VYVnJyHs7q+xkNJsSBPRqD9mGgFftjtyOhwHmLrIDwIJzIr54XqlT
8f7Dj4P5vPcUzhtOHC+00ZEImp7tODHX191uotAiPKSa3zhS50kP93hOwepoZYhn
rJNDLpSk0rzyPZeg5F0W4ZmNv3YrLQ47RdoZbOPBu+U5yyD200lbHlRli56Njgr
NsZMKnwX/Zghl/Yb9mge+jEbqUmxCFGrNTw7gIyXc3lS2CCVQLPcjTa5RjoaUobj
bAzFh6uMUZaTUXKVU48wHwDVDR0jBBgwFoAUKMnouHlh+66LZcePcoKz8gNBGe4w
DQYJKoZiHvcNAQEFBQADggEBAlIBdFJe+7TwikFEdvyJmKBeGigESQU3qIR8KBjC
+EjucWaa2kEnh2H8MdEK1YAuchPjYFCwIo3RRb72HTEAb9/K0G1LuLiHEG6QJPO8U
8nE7vLncBCkVZ3RsoZnwqZBYXq7cGxOIOMeNbB5z6IZUgqhwn1VxxfEz0eM2yw8
GGymBseh5F+PSCd6m8Xwfpv++MLymAFnYAASVLFviH+ZohNKPvpr7LAE6M1B6UFT
LlSjDg+te1NAJG1PoEQlLlYNIkwIMo7fyJyA2QFFcHHW00X+kdZK62LK61UAMYTi
MOMhs3XONNVUkzMPiLVnC/W4WvgChZF14dA9dNknm0WIEp8xggFOMIIBSgIBATAn
MBMxETAPBgNVBAMTCFNTTCBSb290AhCwk27ipHlCr02ufWa7Sv3pMAKGBSsOAwIa
BQAwDQYJKoZiHvcNAQEFBQADggEABQw6A0NGE/Fg16ohkHCT+AiivrjbLSElftB62m
MBkmwGGL4M6GsM7x/pnhMrElIGMXy910c/wdv0hojRhLo43DEdu/sQ0GgIkzFOFu
C1gmLu8wUp7L45o7LWtrhwOWwsjMVskbj//5XGRQ9dJnFb2s0cFhtCTEKkXUMRA
dSPn0YFHS2Uzk6hhNMmjQ1+j1EJy5mFAodljHAJrdwaQcE7Ttwp5jh0zntUbKFE6
1z26UTmt4V61+Z/eqwtPvcAyibgUwV180TayNSbmUd7fqVDPVaO9D+Pn4k1pEzFR
5dEvdHbLschb7zr1YU7KGsDCftNm7EIJZXWz0BnGwE6RAJSg==
</rdpStream>
<rct>REMOTEDESKTOP</rct>
</ReconnectContent>
<ReconnectContent>
<rdpStream>redirectclipboard:i:0 redirectprinters:i:0 redirectcomports:i:1
redirectsmartcards:i:0 devicestoredirect:s: drivestoredirect:s:* redirectdrives:i:1 session
bpp:i:32 prompt for credentials on client:i:1 span monitors:i:1 use multimon:i:1
remoteapplicationmode:i:1 server port:i:3389 allow font smoothing:i:1
promptcredentialonce:i:1 authentication level:i:0 gatewayusagemethod:i:2
gatewayprofileusagemethod:i:0 gatewaycredentialssource:i:0 full address:s:RDVB9-
101180.rdvteam.stbtest.microsoft.com alternate shell:s:||cmd remoteapplicationprogram:s:||cmd
remoteapplicationname:s:cmd.exe remoteapplicationcmdline:s: workspace id:s:RDVB9-
101180.rdvteam.stbtest.microsoft.com use redirection server name:i:1
loadbalanceinfo:s:tsv://MS Terminal Services Plugin.1.RDVB9-101180 alternate full
address:s:RDVB9-101180.rdvteam.stbtest.microsoft.com signscope:s:Full Address,Alternate Full
Address,Use Redirection Server Name,Server
Port,GatewayUsageMethod,GatewayProfileUsageMethod,GatewayCredentialsSource,PromptCredentialOn
ce,Alternate
Shell,RemoteApplicationProgram,RemoteApplicationMode,RemoteApplicationName,RemoteApplicationC
mdLine,Authentication
Level,RedirectDrives,RedirectPrinters,RedirectCOMPorts,RedirectSmartCards,RedirectClipboard,D
evicesToRedirect,DrivesToRedirect,LoadBalanceInfo signature:s: Full Address,Alternate Full
Address,Use Redirection Server Name,Server
Port,GatewayUsageMethod,GatewayProfileUsageMethod,GatewayCredentialsSource,PromptCredentialOn
ce,Alternate
Shell,RemoteApplicationProgram,RemoteApplicationMode,RemoteApplicationName,RemoteApplicationC
mdLine,Authentication
Level,RedirectDrives,RedirectPrinters,RedirectCOMPorts,RedirectSmartCards,RedirectClipboard,D
evicesToRedirect,DrivesToRedirect,LoadBalanceInfo
signature:s:AQABAAEAAAEEgAAMIISFYJKoZiHvcNAQcCoIISBjCCEgICAQExCzAJBgUrDgMC
GgUAMAsGCSqGSIB3DQEHAaCCEI8wggffMIIGx6ADAgECAhBfZzkIP2oDi06PGDo+
oafJMA0GCSqGSIB3DQEBBQUAMBMxETAPBgNVBAMTCFNTTCBSb290MCAxDTkwMDEw
MTAwMDAwMFoYDzIwOTAxMjMxMDAwMDAwWjATMREwDwYDVQQDEWhTU0wgUm9vdDCC
ASiWdQYJKoZiHvcNAQEFBQADggEPADCCAQoCggEBAKBSNjeWWYGMhQa1IGbdEkbC
otl4+TeYARdNALSIXOrd42ohMtR+owHtFAkY4zeantZW00vp6erI8osVvSv6jL4
Wf8WQ6qoNPK9WShb3QbfccXvq+EzRpiVbr+JF90YsC2cuq3ZlW/3FnE7jWcbGon5
DbXCTe6mHbpDgpnq2oG7PsU3rq+EBW8sIvPRegofDens8GM8Dys+eYbCW4o7+EDY
rtaqRuCnjZX5mdmdH1unlD4kzeVv5dFqoZoU5HMBIPPPK+DL56+vZrQy6jyKkEqA
w1zqBhqvHzXWv9+uYyfsX82tRr6x3YnVnh5sdH+CMvpLKsr0fhvwe1Oc3HCvMC
AwEAAaOCBSSwggUnMAwGA1UdEwQFMAMBAf8wggTVBg8rBgEEAYI3E4LfZ4ajUwEE
ggTAMIEvAQIU1NMVGvzdAAECFNtTFJvb3QAAGEBAGECBAhOAFUATABMAASCBJQH
```

AgAAACQAAFTJTQTIACAAAAQABAPMKx61yTu3Bb/jRK6ss6csI/tGxeXhWJ3bH+hq1
Nn+x4ydrjt+/lJufxroG6lzdDgEqQijzqMrRmr6/n9eAr6fMgAXPkFJqhatHlb+XN
JD6Up4scndmZ+ZWNp+BgGtau8kd404pbwoZ5PisPPGPw7E10Hwp60fMiLA8HhK+u
N8U+u4Ha6pmCQ7odpk60wrUN+ekYG2eNO3EW9w8j2a26n2cmNMXib9ulZhGM+Gr
7yVw3wbd28FavfI0qKpDfV9Z+DLqr/RWLMOjq6enL+1Y2XRq3oxjJFC0B4z6UcuE
qIOpQ3MhElScTRCbmDf5eN2iwyS3WYgtQaFjIFZljeeUqBfw57B47bG5/MuF5eq
COGYcqAkeZDB8Ko3526kln923CqVuWIwg7XfTe3ayvlHP+4VhPlol/pII40AdsVK
NjfuHT/47UabRsmyzTiSCGL/mwGKEVxKxjI5ZLH8lgbp2j/Juhzt2Kd7FLpBHg1Y
3unPcdMBx7BI18kjRaqVuTmY0u1U7xCewvNjC405VckPXukfMo5PadzhaHOp5QoM
u6LI3yipTGGT7tFfcOKWaMFF+adtX364x6Tr18EzJHGjaQQtvsZ8uegqoymUNffz+
6fFp2gjKiHu0F4+GL4IiYQ9cijZNB8cZ33MdlXCgBCEGUYcG3u18iBioXBL02tBF
ouPCw21/8zKg+DQp2LoBjWVkbB17pw8dXzSUrOWiuaTJnzQ+MQNc9sCc4FJPfYJJ
ANwa0ql7FN/5Skc3TU64G0StHnBudaFdf7V82ZYGWKyB3fZ8UNpmkOirxmyLpQQ7
WlcKycfMIR5rZEBkGjPbkKcieJBUC3UFznNgMGOLENm18D1ReWgN0kNIMH4896mS
B6B9kN2ywc1POMAE8DeBX6FzR13rbLKakm8CuTo7arS6nw/OuV1xKkOAMNvgUwFJ
g6fqGbJxXoqePIBMXgXqFwXhLkqy/3sVkmW5C4sSQSHuOweWdtg6H6uKne90OHYq
k9FGBZ1f6bYyrTaxo6mObxDKrg5AZLgfp03UYdYADbghMG8oWP5W0wUYEXTH9B0H
VO9Z2Xgz4nr11fmII2tGY0Hhe6hSyynpkROaE6VI18DOKJ14Gi912YY95aUb0y4b
xcFrQf63P72PSPS1ZAUBlo+UsZ1/XfMvJjYiIvKc+wQ80tG0Vi24hfhcTDpiuNJ4
H/aMKdYwowEpYhQnGrC/yL5juBUhUB3x771V8qZjb7wF46f9s0azbAf22XktqIC0
GFYEknWor1kiXYMW3DWFVpCd+2YB0c5jGrLivmdQtXcbx7AzcharSkUmVWfRUgC
ua8aIcVew+6b1Xs1JBSB2vdMPUB/QEZVtQiFfQWtOymxQEVqnZ9B60LBzY00ztKjC
f+bNS24V/wo3vfQuEK0CuHLwmDTjr4Z/9ndy4u6PY0xDO9+pgLaWIhVZpkG12M3g
myN+XvtRDT10Lz7YdA96ur6xSWKcZyJPhYSoC0xm2nq/pBknoS585MbixyWQuldg
MwHhNWNQ0VTBV73zqkiQNmzBJDAdBgNVHQ4EFgQUKMnouHlh+66LZcePcoKz8gNB
Ge4wHwYDVR0bl1XoDTEFkMDgwMzAxMDIzM1owNTEzMDEGA1UEAxMqUkRwQWJktMTAx
BQADggEBAEKDDekZEnl+ZO5IckEzk5BuIwTd9ht/1SSIectM0+tdhJqjLuTcoU6
d/DzoORQobvf3ketK9fHcY+leiCigD2g0XYxfNctFxpoldPbbG1LiYupUHZNBM
mKriwTpXNhaEw1wysJBI9brzB1cOrrGK9Eilo48QLmqPeb4eMrW+h0PFJunaa+kR
NABQOfxzwg32T15z03dTLm59zL/qLvyRS7pDIFGjw4FdbdRhHDSYJv4CSzxcNpd
GCmwRLAs92fKT59JBI7DWT0zezZPXxf0aAjqfWNwjLgdNedIKcbN0DcAbEZBLQvD
xKx2rJseV4iBo28tzGg8+c80fqInoxswggioMI IHkKADAgECAhCwk27ipHLCr02u
fWa7Sv3pMA0GCSqGSIsb3DQEBBQUAMBMxEtAPBgNVBAMTCFNTCBsb290MB4XDTE
MDIwMzAxMDIzM1owNTEzMDEGA1UEAxMqUkRwQWJktMTAxMTg0LnJkdnlYW0uc3RidGVzdC5taWNYb3NvZnQuY29tMIIBIjANBgkqhkiG9w0B
AQEFAAOCAQ8AMIIBCBKCAQEAoO0cj2o9ZWMG8iiz3e315xMvolgSVY/J6dy4pJz5
ZlsGXODw56nq4r9En8/AxEDqMu2DYJA1mc05xHYzqhZullbAV1khgN+EE2Jy0r0X
Tt4slbiETmtMj5wS8Y0qbyrppP0+inU6Zm+FZhkte+Ery/rO+/09c2ei02VRboQ
aEox4jY22nLF7mOCsxdUzFbZFBF7pswtTl/qji6niTf7oyofKFOGZy4EwIrCadth
AvAlBR8GgZ6/snlurF18bX0w0c5om/bQ51E0t6wPgjlitP41zokkwc9xubTgBb81
jp0+J1SgszJoDlqfRsteafy/MimLVNVfoShn35Gos9wmZQIDAQABo4IF1DCCBdAw
IwYDVR0FBwwGjAYoDTEFkMDgwMzAxMDIzM1owNTEzMDEGA1UEAxMqUkRwQWJktMTAx
AQAwCwYDVR0PBAQDAgQMwBGA1UdJQMMMAoGCCsGAQUFBwMBMBMGA1UdJQMMMAoG
CCsGAQUFBwMDMDUGA1UdBwQuMCyCK1JEVki5LTEwMTE4NC5yZHZ0ZWFTLnN0YnRl
c3QubWl1cm9zb2Z0LmNvbTA1BgNVHREELjAsGipSRFZCOS0xMDExODQucmR2dGVh
bS5zdGJ0ZXN0Lm1pY3Jvc29mdC5jb20wgwTtBg8rBgEAYI3E4LfZ4ajUwEeggS+
MIIEugQIU1NMVGvzdAAEBNzhbG1kAAIBBAIBAQQITgBVAEwATAAEggSUBwIAAAck
AABSU0EyAagAAAEAAQBlJtyzjphf5yGhX9Vui4kwv/xpXstGnloPaDKzoFQnPP20
Nb8F4LS5cc9ZJInonf60YjmcD6y3NFHn0Pabam7RMH1tfFms7nKyv56BBh8FJfAC
R9tpworABC5nhlMhYqj+zeJpy6O619OLcymOxEuc/DNVBezgmPuxXLaNjbimUpo
ELpFlU2Lns3190876y+vhO+1ZJgVvpnp1Cn69P0kq7yptIVJcD4yrTkhhlLiVLN50
F73ScmIthN+AIv1XwFawbhaqM3bEOc2ZNZBgg+0y6kDEwM+fRL/i6qnn8OBcBltm
+ZykuNzpyY9VELiLiLxPn9e3dsyJyBmNlPWqPnOOG7R00USrYkiqVvNWdi+4qbf
yIkWgAnNx3qxUebnrigL0948NHP6qHJuqiulfz4yU/tbhlD1KJ0u2UziMhI5m66j
LI2U2b4x9LopuVcno8cVTWtmw7BCRJZsO3/VO751yAtDHc+QLQ39rp846ne50+u
JvZW6BU6/hY1IZT+gtCnWmT+Ixurl/r++40OSgMiAtJR9liFdsoEN6LJwGzx+wFy
Tt7P1OdJeLSiVir+6CUodaAFs+tfGDT0sjsduT9wFRm8i83EXTu7xFWHGUZKGSU
vl6waYIsJZs+Q2x/plWtUNGMI3jyEvl6qGeloYpjmseTy0V86grxFyKZIAuIxeul
EvAm6blqD/btM0YMFZ8RNk7in8OjlBfZyO0f5kMvgBASipOvxGMcpnOmsxKVpb8
ZBI+K7Ewdkjq+W9ViatqO/6Qj9rVu5I5aWAPUoyxy3IF1E3yRs4pvPmNZzxpEhl/
dG19wlebHQZY3cZ1mN602j2fHZ1yRHPCPDNBogFLm/N2Z4qK50tekuuH1k+xB4qY
leZrC7sDVnP128CroKI4G9SM8OSkPikKsrP34BcoGRoTFpeKkBAk5fQOubqUZit
sVImrLExBexlI9184YBkF8rLaFWajFK+p1H68qBRfK0svCpUWhBtiqc447qtCYj
WrwUph6yt+orXmzkfuiKLcdJ1WJfb2t4JxwQf8OJWKxIKfVZy+aOk4BaB57PyC3o
M/JRdxkCiZw7GOW49nd4AMBiJNcgnsdnDm9ZhWUX1sMQKQwqvG7g4YGBWwG+8Zjv
99NT+V3Sw/LUBG7tjsAnPzJYG0Y6prwF749+M2FnBBOZWwdIrACT7izOGKEcPxWT
LnKfu7PSksomly7cq5YskYD8bamcmxSIS7jwav/BLuTRGV5EwvGeM8eUfDkxQRR
OW3IDw0HjD6VYVnJyHs7q+xkNJsSBPRQd9mGgFfTjtyOhwHmLrIDwIJzIr54XqlT
8f7Dj4P5vPcUzhtOHC+00ZE1mp7tODHX191uotAiPKSa3zH5S0kP93hOwepoZYhn
rJNDLpSk0rzyPZeg5F0W4ZmNv3YrLQ47RdoZbOPBu+U5yyD2001bHlR1i56NJgr

NsZMKnwX/Zghl/Yb9mge+jEbgUmxCfGrNTw7gIyXc3lS2CCVQLPcjTa5RjoaUobj
bAzFh6uMUZaTUXKVU48wHwYDVR0jBBgwFoAUKMnouHlh+66LZcePcoKz8gNBGe4w
DQYJKoZIhvcNAQEFBQADggEBAlIBdFJe+7TwikFEdivyJmKBeGigESQU3qIR8KBjC
+EjuCwa2kEnh2H8MdEKlYAucHPJyFCwIo3RRb72HTEAb9/K0G1LuLiHEG6QJPO8U
8nE7vLncBCkVZ3RsoZnwgZBYXq7cGxOIOMeNbB5z6IZUgqhwn1VxxfEz0eM2yw8
GGymBseh5F+PSCd6m8Xwfpv++MLymAFnYAASVlfviH+ZohNKPvpr7LAE6M1B6UFT
LlSjDg+te1NAJG1PoEQlL1yNIkwIMo7fyJyA2QFFcHHW00X+kdZK62LK61UAMYTi
MOMhs3XOnNVUkzMPILVnC/W4WvgChZF14dA9dNknm0WIEp8xggFOMIIBSgIBATAn
MBMxETAPBgNVBAMTCFNTTCBSb290AhCwk27ipHlCr02ufWa7Sv3pMAkGBSsOAwIa
BQAwDQYJKoZIhvcNAQEBBQAEggEARg6AoNGE/Fg16ohkHCT+AivrjbLSEltfB62m
MBkmwGG14M6GsM7x/pnhMrElIGMXy91Oc/wdv0hojRhLo43DEdu/sQ0GgIkzFOFu
C1gmLu88wUp7L45o7lWtrhwOWWsJMVskbj//5XGrQ9dJnFb2s0cFhtCTEkKuXMRA
dSPn0YFHS2Uzk6hhNMmjQ1+jlEJy5mFAod1jHAJrdwaQce7Ttwp5jh0zntUbKFE6
1z26UTmt4V61+Z/eqwtPvcAyibgUwVl80TayNSbmUd7fqVDPVa09D+Pn4k1pEzfR
5dEvdHbLSCHbB7zrlYUh7KGsDCftNm7EIJZWXzoBnGwE6RAJSg==
</rdpStream>
<rect>REMOTEAPPLICATION</rect>
</ReconnectContent>
</wksprc>
</ReconnectContents>

5 Security

5.1 Security Considerations for Implementers

There are no known additional security considerations for the Remote Desktop Workspace Runtime Protocol, but server implementers are encouraged to use transport mechanisms that support encryption and integrity verification of the messages.

5.2 Index of Security Parameters

None.

6 Appendix A: Full WSDL

```
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/"
xmlns:tns="http://schemas.microsoft.com/ts/2010/09/rdweb"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"
targetNamespace="http://schemas.microsoft.com/ts/2010/09/rdweb"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <xsd:schema elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/ts/2010/09/rdweb">
      <xsd:element name="GetRDPFiles" nillable="true">
        <xsd:complexType/>
      </xsd:element>
      <xsd:element name="GetRDPFilesResponse" nillable="true">
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element minOccurs="1" maxOccurs="1" name="GetRDPFilesResult" nillable="true"
type="tns:ReconnectContents"/>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
      <xsd:complexType name="ReconnectContents">
        <xsd:sequence>
          <xsd:element minOccurs="0" maxOccurs="1" name="version" nillable="true"
type="xsd:string"/>
          <xsd:element minOccurs="0" maxOccurs="1" name="wksprc" nillable="true"
type="tns:ArrayOfReconnectContent"/>
        </xsd:sequence>
      </xsd:complexType>
      <xsd:complexType name="ArrayOfReconnectContent">
        <xsd:sequence>
          <xsd:element minOccurs="0" maxOccurs="unbounded" name="ReconnectContent"
nillable="true" type="tns:ReconnectContent"/>
        </xsd:sequence>
      </xsd:complexType>
      <xsd:complexType name="ReconnectContent">
        <xsd:sequence>
          <xsd:element minOccurs="0" maxOccurs="1" name="rdpStream" nillable="true"
type="xsd:string"/>
          <xsd:element minOccurs="1" maxOccurs="1" name="rct"
type="tns:ReconnectContentType"/>
        </xsd:sequence>
      </xsd:complexType>
      <xsd:simpleType name="ReconnectContentType">
        <xsd:restriction base="xsd:string">
          <xsd:enumeration value="REMOTEDESKTOP"/>
          <xsd:enumeration value="VMREMOTEDESKTOP"/>
          <xsd:enumeration value="REMOTEAPPLICATION"/>
        </xsd:restriction>
      </xsd:simpleType>
    </xsd:schema>
  </wsdl:types>
  <wsdl:portType name="RDWebService">
    <wsdl:operation name="GetRDPFiles">
      <wsdl:input wsaw:Action="http://schemas.microsoft.com/ts/2010/09/rdweb/GetRDPFiles"
name="RDWebService_GetRDPFiles_InputMessage"
message="tns:RDWebService_GetRDPFiles_InputMessage"/>
      <wsdl:output wsaw:Action="http://schemas.microsoft.com/ts/2010/09/rdweb/GetRDPFiles"
name="RDWebService_GetRDPFiles_OutputMessage"
message="tns:RDWebService_GetRDPFiles_OutputMessage"/>
    </wsdl:operation>
  </wsdl:portType>
  <wsdl:binding name="RDWebServiceSoap" type="tns:RDWebService">
    <soap:binding transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="GetRDPFiles">
```

```

        <soap:operation soapAction="http://schemas.microsoft.com/ts/2010/09/rdweb/GetRDPFiles"
style="document"/>
        <wsdl:input name="RDWebService_GetRDPFiles_InputMessage">
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output name="RDWebService_GetRDPFiles_OutputMessage">
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>
<wsdl:binding name="RDWebServiceSoap12" type="tns:RDWebService">
    <soap12:binding transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="GetRDPFiles">
        <soap12:operation
soapAction="http://schemas.microsoft.com/ts/2010/09/rdweb/GetRDPFiles" style="document"/>
        <wsdl:input name="RDWebService_GetRDPFiles_InputMessage">
            <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output name="RDWebService_GetRDPFiles_OutputMessage">
            <soap12:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>
<wsdl:message name="RDWebService_GetRDPFiles_InputMessage">
    <wsdl:part name="GetRDPFiles" element="tns:GetRDPFiles"/>
</wsdl:message>
<wsdl:message name="RDWebService_GetRDPFiles_OutputMessage">
    <wsdl:part name="GetRDPFilesResponse" element="tns:GetRDPFilesResponse"/>
</wsdl:message>
</wsdl:definitions>

```

7 Appendix B: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include updates to those products.

- Windows 8 operating system
- Windows Server 2012 operating system
- Windows 8.1 operating system
- Windows Server 2012 R2 operating system
- Windows 10 operating system
- Windows Server 2016 operating system
- Windows Server operating system

Exceptions, if any, are noted in this section. If an update version, service pack or Knowledge Base (KB) number appears with a product name, the behavior changed in that update. The new behavior also applies to subsequent updates 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.

8 Change Tracking

This section identifies changes that were made to this document since the last release. Changes are classified as Major, Minor, or None.

The revision class **Major** means that the technical content in the document was significantly revised. Major changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements.
- A document revision that captures changes to protocol functionality.

The revision class **Minor** means that the meaning of the technical content was clarified. Minor changes do not affect protocol interoperability or implementation. Examples of minor changes are updates to clarify ambiguity at the sentence, paragraph, or table level.

The revision class **None** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the relevant technical content is identical to the last released version.

The changes made to this document are listed in the following table. For more information, please contact dochelp@microsoft.com.

Section	Description	Revision class
Z Appendix B: Product Behavior	Added Windows Server to the list of applicable products.	Major

9 Index

A

Abstract data model

- [client](#) 15
- [server](#) 11
- [Applicability](#) 8
- [Attribute groups](#) 10
- [Attributes](#) 9

C

- [Capability negotiation](#) 8
- [Change tracking](#) 28
- Client
 - [abstract data model](#) 15
 - [initialization](#) 16
 - [local events](#) 16
 - [message processing](#) 16
 - [sequencing rules](#) 16
 - [timer events](#) 16
 - [timers](#) 15
- [Common data structures](#) 10
- [Complex types](#) 9

D

Data model - abstract

- [client](#) 15
- [server](#) 11

E

Events

- [local - client](#) 16
- [local - server](#) 15
- [timer - client](#) 16
- [timer - server](#) 15

F

- [Fields - vendor-extensible](#) 8
- [Full WSDL](#) 25

G

- [Glossary](#) 5
- [Groups](#) 10

I

- [Implementer - security considerations](#) 24
- [Index of security parameters](#) 24
- [Informative references](#) 7
- Initialization
 - [client](#) 16
 - [server](#) 11
- [Introduction](#) 5

L

Local events

- [client](#) 16
- [server](#) 15

M

Message processing

- [client](#) 16
- [server](#) 11
- Messages
 - [attribute groups](#) 10
 - [attributes](#) 9
 - [common data structures](#) 10
 - [complex types](#) 9
 - [elements](#) 9
 - [enumerated](#) 9
 - [groups](#) 10
 - [namespaces](#) 9
 - [simple types](#) 9
 - [syntax](#) 9
 - [transport](#) 9

N

- [Namespaces](#) 9
- [Normative references](#) 6

O

Operations

- [GetRDPFiles](#) 11
- [Overview \(synopsis\)](#) 7

P

- [Parameters - security index](#) 24
- [Preconditions](#) 7
- [Prerequisites](#) 7
- [Product behavior](#) 27

R

- [References](#) 6
 - [informative](#) 7
 - [normative](#) 6
- [Relationship to other protocols](#) 7

S

Security

- [implementer considerations](#) 24
- [parameter index](#) 24
- Sequencing rules
 - [client](#) 16
 - [server](#) 11
- Server
 - [abstract data model](#) 11
 - [GetRDPFiles operation](#) 11
 - [initialization](#) 11
 - [local events](#) 15
 - [message processing](#) 11
 - [sequencing rules](#) 11

[timer events](#) 15
[timers](#) 11
[Simple types](#) 9
[Standards assignments](#) 8
Syntax
[messages - overview](#) 9

T

Timer events
[client](#) 16
[server](#) 15
Timers
[client](#) 15
[server](#) 11
[Tracking changes](#) 28
[Transport](#) 9
Types
[complex](#) 9
[simple](#) 9

V

[Vendor-extensible fields](#) 8
[Versioning](#) 8

W

[WSDL](#) 25