

IPWorks DNS Management User Guide

USER GUIDE

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1 Introduction

The DNS Management is the primary graphic user interface of Ericsson IPWorks.

The DNS Management is used to perform a variety of address management and server configuration tasks.

This document provides information on managing and viewing the IPWorks IP network services.

1.1 Document History

Table 1

Rev.	Date	Sign.	Comment
Rev. A	2017-01-16	ENANAWA	Release for IPWorks 1.13.
Rev. B	2018-06-01	ENANAWA	Update for TR:HW81775.
Rev. C	2018-07-02	ENANAWA	Update for WP: DNS GUI Improvement.

1.2 Prerequisites

This section describes the prerequisites which must be fulfilled before installing and using DNS Management.

1.2.1 Personnel Requirement

This section assumes that readers have knowledge and experience with:

- Microsoft Windows or Ubuntu
- IP Networking
- Concepts, terminologies, and telecommunication abbreviations, such as TCP/IP, packet data networks and protocol servers.
- Ericsson Common Information Model (ECIM)
- Node Configuration Data
- Extensible Markup Language (XML)



1.2.2 Software Requirement

The minimum software requirements for installing DNS Management are as follows:

- Microsoft Windows 7 (64 bit) or Ubuntu 16.04 (64 bit)
- Java 1.7 or Java 1.8
- SSH client

1.3 Related Information

Definition and explanation of acronyms and terminology, trademark information, and typographic conventions can be found in the following documents:

- Glossary of Terms and Acronyms
- Trademark Information
- Typographic Conventions



2 DNS Management Overview

The DNS Management is a single-user graphic user interface.

It facilitates the configuration, control, and monitoring of services.

The DNS Management supports configuration on DNS and ASDNS including creating, deleting, modifying, and searching.





3 Key Concepts of DNS Management

This section provides information on the common features found in the DNS Management. And these features are present in all pages except for the Login and Logout pages.

3.1 Configurable Objects

In order to use the DNS Management, the user needs to understand the basic concept of the objects.

The DNS Management allows the user to create, edit, and view these objects.

The important object-related definitions are as follows:

— Class

Each object has a class that defines some basic structural information on the object. Classes can be defined as extensions of other classes, which means there is an inheritance hierarchy of class definitions. DnsServer, ARecord, and MasterZone are all examples of classes.

— Field

A class defines a set of fields that can have a single value or multiple values for the project. These values can be unordered or ordered.

Name, status, and description are examples of fields for the DnsServer class.

Note: The fields with “*” are mandatory fields.

— Key

Each class has a field, or set of fields, whose values can be used to identify an object in that class uniquely. This unique identifier is known as the key value. In some classes, the key contains several fields, while in others it is just a single field.

Partition, container, dnsname, and address are the key fields for an ARecord object.

— Relationship

Each class defines a set of relationships that exist between objects of that class and objects in other classes. Relationships are established by one or more fields having common values between objects. Often the common values are keys.



Relationships can be used to navigate among the objects. A relationship may link an object with one other object or many other objects. This depends on the context and meaning of the relationship. The user can perform a relationship search for this object in the GUI Search results page.



4 Starting DNS Management

This section describes how to install and uninstall DNS Management.

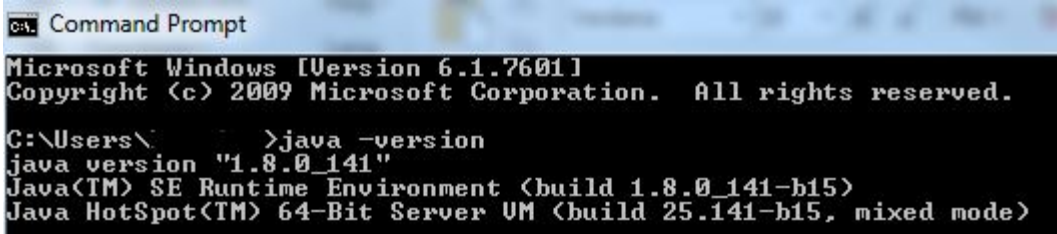
4.1 Installing DNS Management in Windows

DNS Management requires Java version 1.7 or 1.8.

Before installation, users need to verify that Java is executable on the Path.

Open a Command Prompt Window and execute:

```
C:\> java -version
```




```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\> java -version
java version "1.8.0_141"
Java(TM) SE Runtime Environment (build 1.8.0_141-b15)
Java HotSpot(TM) 64-Bit Server VM (build 25.141-b15, mixed mode)
```

Figure 1 Java-version on Windows

The java version in Figure 1 is 1.8 and matches the requirement.

To install DNS Management, do:

1. Download the utility tar file named “19010-CXP9029034_3_Ux_<Revision Number>.tar.gz” under ticket path and move it to your Windows machine.
2. Unpack the tar file.
3. Locate to the folder ipworks_gui, and unpack the file “IPWorks_GUI-win32.tar.gz”.
4. Click the .exe file  **DNSManagement** to start DNS Management.

4.2 Installing DNS Management in Ubuntu

DNS Management requires Ubuntu version of 16.04.

DNS Management requires Java version 1.7 or 1.8.

Before installation, users need to verify that Java is executable on the Path.

Open a terminal and execute:

```
~$ java -version
```



```
swx@swx-VirtualBox:~$ java -version
openjdk version "1.8.0_171"
OpenJDK Runtime Environment (build 1.8.0_171-8u171-b11-0ubuntu0.16.04.1)
OpenJDK 64-Bit Server VM (build 25.171-b11, mixed mode)
```

Figure 2 Java-version on Ubuntu

The java version in Figure 2 is 1.8 and matches the requirement.

To install DNS Management, do:

1. Download the tar file named “19010-CXP9029034_3_Ux_<Revision Number>.tar.gz” under ticket path and move it to your Linux machine.
2. Unpack the tar file
3. Locate to the folder ipworks_gui, and unpack the file “IPWorks_GUI-linux.tar.gz”.



4. Click the file  to start DNS Management.

4.3 Uninstalling DNS Management

Delete the folder containing all DNS Management-related documents and the uninstallation is finished.



5 How to use DNS Management

This section describes how to use DNS Management.

The example illustrations in section 5 are gathered from Windows 7.

5.1 Building A Tunnel

1. If the client can access IPWorks OAM directly, to build a internal tunnel to access Storage Server through OAM interface, use one of the methods:

— Using SSH command:

```
ssh root@<OAM IP>
```

```
SC-x:~# ssh -L <Storage Server IP>:17071:169.254.100.23:17071 root@<IPWorks OAM IP>
```

Set Storage Server IP to IPWorks OAM IP on DNS GUI.

2. If the client cannot access IPWorks OAM directly, build two tunnels:

— One is between Client and jump server.

— Another is between jump server and storage server.

```
+-----+<-port 17071->+-----+<-port 17071->+-----+
| Client|-----|jump_server|-----| Storage Server|
+-----+          +-----+          +-----+
Localhost          1.1.1.1              2.2.2.2
```

Suppose the Jump Server IP is 1.1.1.1 and the IPWorks IP is 2.2.2.2.

To build a tunnel, use one of the methods:

— Using SSH command:

- Windows:

```
ssh -L 17071:127.0.0.1:17071 <username in Jump Server>@1.1.1.1
```

- Jump Server:

```
ssh -L 17071:169.254.100.23:17071 root@2.2.2.2
```

Set Storage Server IP to 127.0.0.1 on DNS GUI.

— Using DNS Management:



- Log on to SC by OAM IP:

```
ssh root@2.2.2.2
```

- Create an internal tunnel:

```
ssh -L 2.2.2.2:17071:169.254.100.23:17071 root@2.2.2.2
```

The example figure below shows building a tunnel through DNS Management GUI. Select the **Tunneling** checkbox, and then fill out the Jump Server IP address and account information.

Set Jump Server IP to Jump Server IP (such as, 1.1.1.1) on DNS GUI.

Set Storage Server IP to IPWorks OAM IP (such as, 2.2.2.2) on DNS GUI.



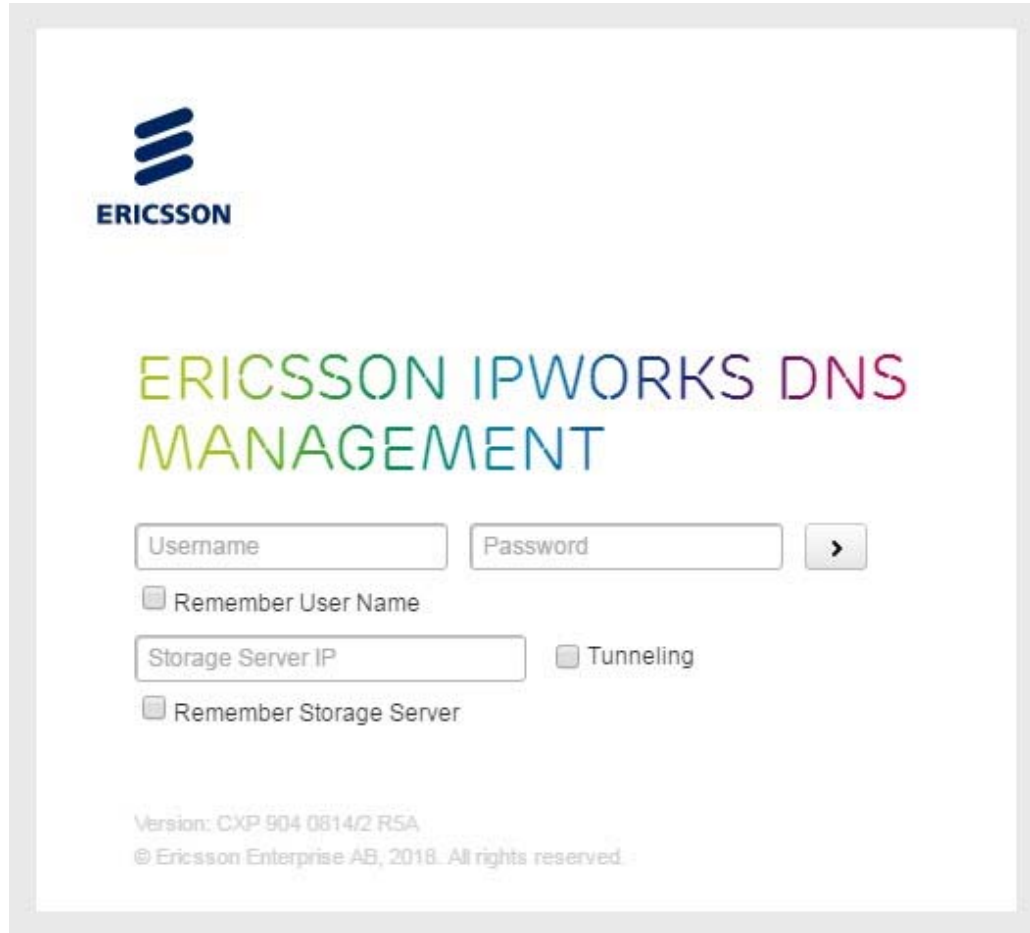
ERICSSON IPWORKS DNS MANAGEMENT

☒ Remember User Name☒ Tunneling☒ Remember Storage Server

Version: CXP 904 0814/2 R5A

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5.2 Logging on the DNS Management



The screenshot shows the login interface for Ericsson IPWorks DNS Management. At the top left is the Ericsson logo. Below it, the title "ERICSSON IPWORKS DNS MANAGEMENT" is displayed in a multi-colored font. The login form includes a "Username" input field, a "Password" input field, and a right-pointing arrow button. Below these are two checkboxes: "Remember User Name" and "Remember Storage Server". There is also a "Storage Server IP" input field and a "Tunneling" checkbox. At the bottom, the version "Version: CXP 904 0814/2 R5A" and copyright "© Ericsson Enterprise AB, 2018. All rights reserved." are shown.

Figure 3 Logging on the DNS Management


1. Enter the username and password.

Note: If the Remember User Name checkbox is ticked, the username can be remembered and used for next login. If the checkbox is cleared, the remembered username is removed.

2. Enter the Server IP.

Note: It is recommended to use the MIP address of the SC node.

If the Remember Storage Server checkbox is ticked, the server IP is remembered and used for next login. If the checkbox is cleared, the remembered IP is removed.

3. Click the button .



Note: When using DNS Management, the Storage Server port must be set to 17071 (default value). Distinguished Name (DN) of the port attribute is:

```
ManagedElement=<Node Name>,IpworksFunction=1,IpworksCommonRoot=1,StorageServer=1
```

A sample interface page appears after login.

Figure 4 shows the sample interface page which contains following three common user frames.

- Header Frame: The frame across the top of the page, containing the title of the page.
- Tiles Frame: The left-hand frame of the browser page, containing links for navigation and operations.
- Main Frame: The large right-hand frame, where the items of interest are displayed and operated on.

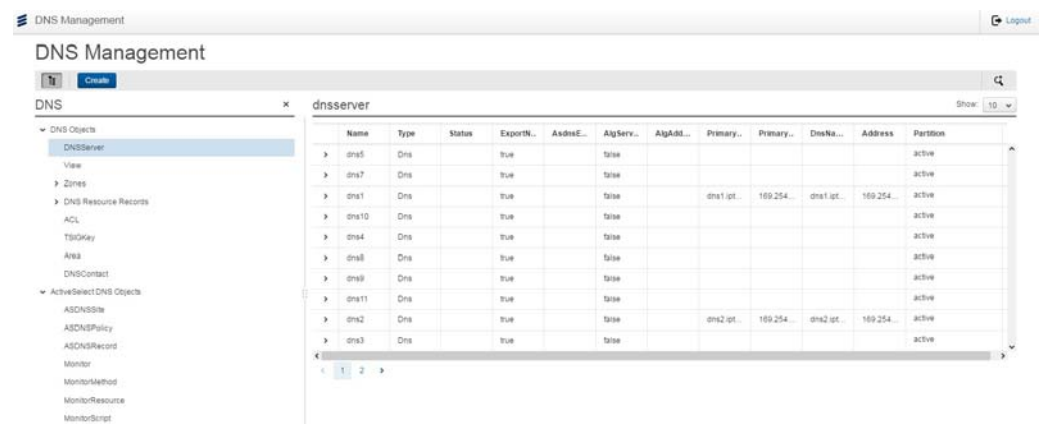


Figure 4 Sample Interface Page

For more information on the parameters in **DNS Objects**, refer to IPWorks DNS, ASDNS, ENUM Parameter Description.

5.2.1 Header Frame

The header frame displays a title related to the currently selected operation and object.

The title consists of a specific name for the selected operation, such as: Search Results, Create, or Advanced Search, and the object associated with the operation.

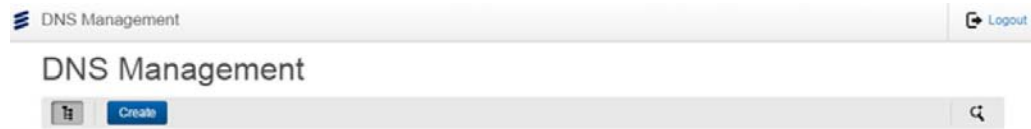






Figure 5 Header Frame

- Display mode : Switch the display mode of the main frame between full-screen and non-full-screen.
- Create : Allow the user to create an object. The Create page is identical to the View/Edit page.
- Search : Allow the user to specify a search in the title.
- Logout : Click to log out.

5.2.2

Tiles Frame

The tiles frame contains grouped navigation and action operations. It appears when the user executes operations on specific objects. The operations act on the contents of the main frame.

These tiles contain groups of related links, drop-down lists, Text boxes, and operation buttons. Additional operations are added to the common tile frame depending on the type of operation or object requested.

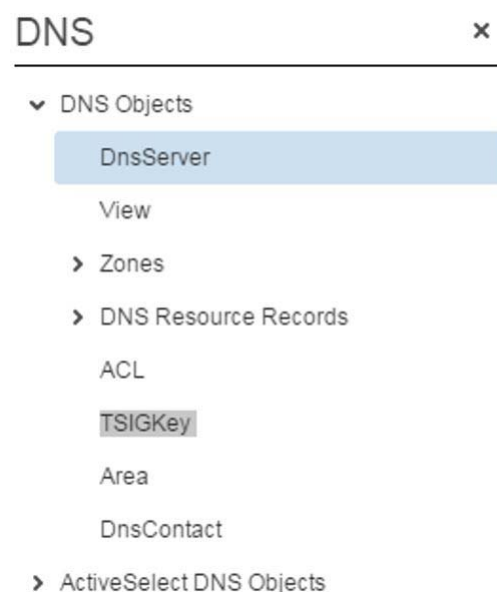


Figure 6 Tiles Frame



5.2.3 Main Frame

The main frame is the area where objects are displayed and the launch point for editing these objects. The width of the column can be adjusted manually.

Note: Click any object in tile frame, the information in main frame will be refreshed.

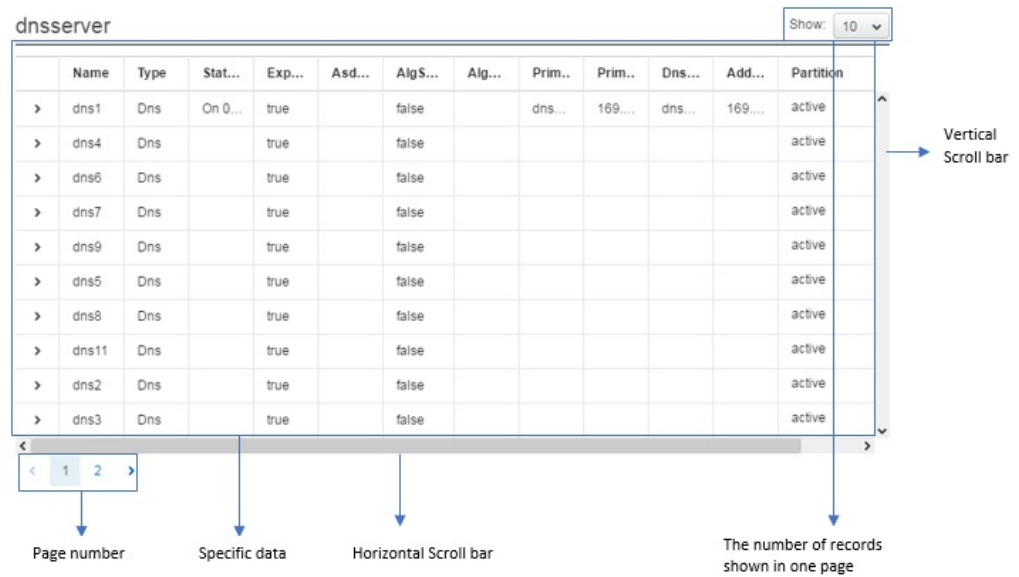


Figure 7 Main Frame-1

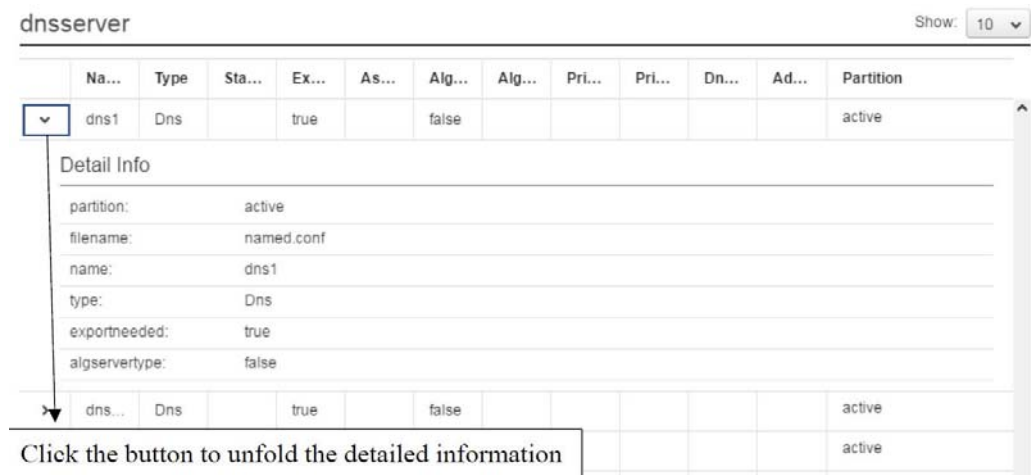


Figure 8 Main Frame-2

5.3 Creating DNS Object

This section describes how to create a DNS object.



To create a DNS object, click the button **create** in the header frame (refer to Figure 4) .

Create

dnsserver ▼

Name*

Partition*

▼ More Options

Figure 9 Creating DNS Object

1. Select the **Object Type**.

Object Type: allow the user to choose which type of object to create.

Please select ▼

- dnsserver
- view
- masterzone
- slavezone
- fixedzone
- hintzone
- localhostzone
- loopbackzone
- forwardzone
- stubzone

Figure 10 Object Type

2. Fill out the fields **Name** and **Partition**.
3. Unfold the **More Options**, and the user can fill out more detailed information based on the user requirements.

For more information on the parameters in DNS objects, refer to [IPWorks DNS, ASDNS, ENUM Parameter Description](#) and the section [DNS Options in IPWorks Configuration Management](#).



Address	<input type="text"/>
Option	<input type="text"/>
Description	<input type="text"/>
PostUpdateScript	<input type="text"/>
Implementation	<input type="text"/>
Format	<input type="text"/>
Filename	<input type="text" value="named.conf"/>
Location	<input type="text"/>
FixedZone	<input type="text"/>

Figure 11 More Options

- Click the button **Create** and save the new object.

If the filled-in parameter does not match the requirements, creating operation will be failed and an error message will be displayed.

5.4 Editing DNS Object

If the users want to modify a DNS object, move the mouse on the object and the edit button will be displayed.

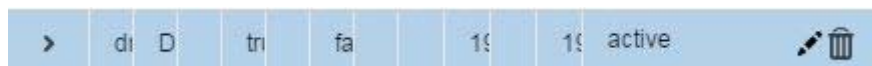


Figure 12

- Click the edit button , the editing page is displayed.



Edit



dnserver

Name*	<div>dns1</div>
Partition*	<div>active</div>
ExportNeeded	<div>true</div>
AsdnsEnabled	<div></div>
AlgServerType	<div>false</div>
AlgAddress	<div></div>
DnsName	<div> </div>
Address	<div></div>
Option	<div></div>
Description	<div></div>
PostUpdateScript	<div></div>
Implementation	<div></div>
Format	<div></div>
Filename	<div>named.conf</div>
Location	<div></div>
FixedZone	<div></div>

Save

Cancel


Figure 13 Edit Page



2. Edit the parameters, then click .

As shown in Figure 13, the key parameters including **DNS type**, **Name**, and **Partition** are read-only, and the users can edit other information wanted to modify.

5.5 Deleting DNS Object

If the users want to delete a DNS object, move the mouse on the object and the delete button  will be displayed.

1. Click the delete button .

A confirmation message will be displayed.

2. Click the Delete button  in the confirmation message.

Delete *dnsserver* Instance

Are you sure you want to delete this *dnsserver* instance?
Delete dnsserver object will also delete some objects in
[View] [TSIGKey] [DNSContact].
Do you want to continue?




Figure 14 Confirmation Message

5.6 Using Advance Search Page

The Advance Search Page enables the users to search specific objects and view them in a form. The results of the search are displayed.

To use advance search page, do:

1. Select the object type in the tiles frame. For example: DNSServer.
2. Click the search button  in the header frame.
3. Fill out the search criteria.

The logical relationships between the search parameters are “AND”.



Note: The fields **Name** and **Partition** with “*” are not mandatory. The search takes less time, if the **Name** and **Partition** are filled out.



Advance Search

Search

Name*

dns1

Partition*

active

Type

Status

ExportNeeded

AsdnsEnabled

AlgServerType

AlgAddress


PrimaryDnsName

PrimaryAddress

DnsName

Address

Figure 15 Advance Search Page

4. Click the button .



The search results will be displayed in the main frame.

Name	Type	Stat...	Exp...	Asd...	Alg...	Alg...	Prim...	Prim...	Dns...	Add...	Partition
dns1	Dns		true		false		dns...	169...	dns...	169...	active

Advance Search

Name*

Partition*

Type

Status

ExportNeeded

AsdnsEnabled

AlgServerType

AlgAddress

PrimaryDnsName

PrimaryAddress



DnsName

Address

Figure 16 Search Results

5.7 Updating DNSServer status


To update the status of DNSServer, do:

1. Move mouse on the object and the update button  is displayed.
2. Click the update button .

A confirmation message will be displayed.

Update/ DnsServer 12345678901234567890123456789012

☐ rebuild

3. Click the **rebuild** option based on requirement, and click the refresh button  in the confirmation message.

Note: If there is a big amount of data needs to be updated, it is recommended to use IPWCLI instead of DNS Management to update DNSServer status.



5.8 Logging out DNS Management

To log out DNS Management, do:

1. Click the logout button  Logout in the header frame.
2. Click “OK” on the popup window.

Logout

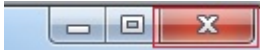
Are you sure you want to log out?



Figure 17 Logout

3. DNS Management turns to Login interface, when the current user successfully logs out DNS Management.

Note: After 30 minutes with the operation (such as get, create, modify, and delete), DNS Management turns to Login interface automatically.

If using button  to close the window, make sure log out DNS Management first.





Reference List

- [1] Glossary of Terms and Acronyms
- [2] Trademark Information
- [3] Typographic Conventions
- [4] IPWorks Performance Measurements
- [5] IPWorks DNS, ASDNS, ENUM Parameter Description
- [6] IPWorks Configuration Management