Standardizing Gulf Air PC Names
Distributed Systems Services, EDS Bahrain

1 Revision History

Version	Date	Changes
1.0	May 31, 2007	Initial version
1.1	June 3, 2007	Updated sections 2, 3 and corrected diagram

2 Introduction

This document provides a brief overview of what the PC rename script does and how it works. The script is responsible for standardizing the names of all non-shared PCs according to a predefined set of criteria, discussed below. Standardizing the names of shared PCs, which aren't tied to individual members of staff, will be done in a follow-up stage.

What the script does is rename all PCs whose names are in the form gf###abc[1] where ### is one or more digits and abc is one or more letters according to our predefined set of criteria. It skips all other names. Appropriate checks are done throughout.

Our rules are as follows: Each standardized PC name consists of a prefix, an identifier and a suffix.

Prefix E {LT, DT, TC} [2]

Identifier : N

Suffix : N [3]

A prefix is LT if the machine is a laptop, DT if it's a desktop and TC if it's a thin client. A suffix is simply a non-negative number that is formed as such: "-01", "-07", etc. An identifier is a staff number.

Here are examples of standardized PC names: DT990799-01, DT990799-02, LT54321-05

A non-standardized name may look like any of the following: gf990799a, gf990799-2, GF54321_01

3 How the script is structured

There are four components in our universe: 1. the script, 2. the PC, 3. the set of rules and 4. Active Directory. At present, the script interacts with the PC to get its name and with the set of rules to determine how to assign prefixes and suffixes. Determining whether a PC is a desktop, laptop or thin-client is done via lists that are defined in two external files.

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[1] Or if you like /gf(\d)*(.)*/gi
[2] Prefix is a member of the set {LT, DT, TC}
[3] Suffix and identifier are of type natural number

Within the script there is a checker that makes sure that a PC that is to be renamed hasn't already been renamed. There's also the concept of a register file that provides a persistent storage for keeping track of how many PCs a member of staff has been allocated. They work together.

The register is simply a text file that stores a "staff number, PC count" pair on each line. The PC count refers to how many PCs have been allocated to a particular staff number. When the script is running, prior to renaming a PC it runs the checker, which determines whether the PC has already been renamed. This is done by checking 1) whether the register contains the given staff number and 2) whether the PC name's suffix is less than or equal to the PC count in the register for that staff number. An example of how it works is shown below:
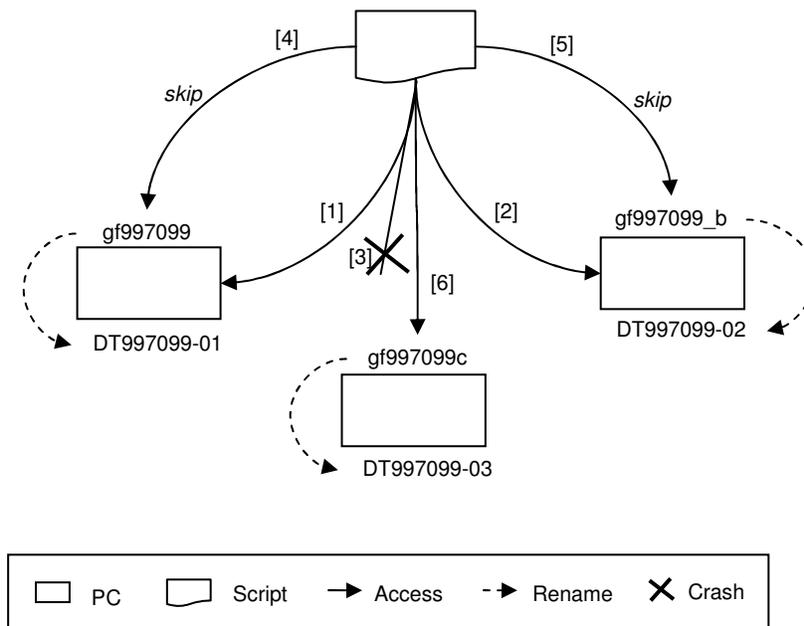
Here we consider the case where a user has three machines associated with him or her. The script successfully renames the first two, incrementing the count for that staff number in the register to 2. Upon trying to rename the third one, it fails for whatever reason. When the script is restarted, it checks the name of the first PC, now renamed to DT997099-01, compares its suffix value of 1 to the count in the register, 2, and realizing that the former is less than the latter skips this PC and moves to the next. It does the same for the second one. Once it gets to the third machine, it realizes that it has non-standard suffix, so it goes ahead and renames it as normal.

4 Final Remarks

The script will be deployed on subsets of the entire pool of Gulf Air PCs. It will run locally on each machine, but will write to the log and register files on a central server. The next version of this document will be sent out once the testing for the current script is given the ok by the stakeholders. More information can be found at the top of the pc_rename_script_v15.vbs file.