**COMMONWEALTH OF PENNSYLVANIA**

**HEALTH & HUMAN SERVICES DELIVERY CENTER**

INFORMATION TECHNOLOGY PROCEDURE

|  |  |
| --- | --- |
| Name of Procedure: | Number: |
| **Network Assessment and Redesign** | **PRO-ENSS018** |
| Domain: | Category: |
| **Network** | **Network Design** |
| Date Issued: | Issued By: |
| **05/09/2001** | **Dean Schutte, TSO Compute Service Delivery Chief, Health & Human Services Delivery Center** |
| Date Revised: |
| **07/28/2020** |

**Abstract:**

The Health and Human Services Delivery Center (HHS DC) supports the Departments of Health (DOH), Human Services (DHS), Aging (PDA), Drug and Alcohol Programs (DDAP) and Military and Veterans Affairs (DMVA).

Each site at the Health & Human Services Delivery Center (HHS DC) connected to the HHS DC network may need upgrades and performance improvements to its site network.

**General:**

The designated site information technology (IT) coordinator or electronic data processing (EDP) coordinator can initiate a site, network-configuration survey to determine if an upgrade to the site network is needed.

The purpose of this document is to provide

1. A procedure to request an IT survey of an existing site network configuration for possible upgrades and performance improvements.
2. Guidance completing the network assessment report using the [*Network Assessment Template*](http://mydhs/cs/groups/webcontent/documents/communication/p_032185.doc)*.*

**Procedure:**

**Network Assessment Procedure**

Following is a procedure to request an IT survey of an existing site network configuration for possible upgrades and performance improvements.

| **Actor** | **Action** |
| --- | --- |
| Designated site IT coordinator or EDP coordinator | Contact HHS DC for assistance in beginning the process of evaluation and reporting current network equipment, configurations and locations. |
| IT coordinator | Complete the initial IT survey forms and provide the appropriate information to section 1 based on the current network configuration.  The completed form (section 1) will be forwarded to HHS DC for review and the appropriate vendor will be contacted to schedule an on-site walk thru and interviews with the IT Coordinator and other key staff. |
| Site IT Coordinator | Be present to assist the vendor in completing section 2 and section 3 of the IT Survey forms. The IT Coordinator should be prepared to give estimates of anticipated user growth and network growth. |
| The Vendor | Complete the IT Survey forms and compile a formal report to the HHS DC Network Configuration Team. This report is based on the results of the IT Survey, interviews and recommendations from the vendor for reconfiguration of the site network.  The formal report will meet the requirements in the outline in “[Appendix I](#AppendixI)” as a written report.  The report will be reviewed and, if approved, an FL will be generated. |

* Sites are **strongly encouraged** to hire qualified professionals to install and terminate cable. It is **vitally important** to accurately document the installation, whether professional cable installers or departmental staff are used. Before any cabling is installed, one should obtain accurate copies of building blueprints and document the end points (room and IDF) and path of all horizontal Cat 5 and fiber optic cable runs. Each port on the patch panel should have the same **unique** label as the wall plate port in a room. Both ends of the patch cable should also have an identical, **unique** label. In addition, one should maintain a database that minimally maps the patch panel/wall plate port label to a room location and includes the corresponding label for the patch cable as well as a unique hub port number (usually specified through management software).
* Since the failure of any network component could mean that all devices attached to that device will be unable to communicate, it is important to have a viable disaster recovery and maintenance plan in place, especially for server connections. One plan is to execute a hardware maintenance contract with the vendor who can supply a functioning component for the failed one. The contract should include software/firmware upgrades. The major downside to this type of plan is that there may be an unacceptable delay in delivering the replacement component in the event of an emergency.

An alternative plan is to maintain or have access to spare router/switch components on campus.

* HHS DC expects that the report will be used as the basis for a contract or statement of work for completion of the IT infrastructure upgrading as recommended. The actual work contracted for completion may require modification as deemed necessary by the Program Office, OIS and/or the site.

**Appendix I: Completing the Network Assessment Report**

Use the [*Network Assessment Template*](http://mydhs/cs/groups/webcontent/documents/communication/p_032185.doc) to write the report. Use the following outline while writing the report.

I. Executive Summary

* Write a short narrative including conclusions and recommendations.

II. Overview of Work Completed

* Survey assessment process description. Include times, dates and contacts.
* Location Description: department, bureau, and so on.
* BuildingDescription: for each building surveyed, assessed, and included in the recommendations.
* Local staff-interviewsummaries: findings and needs as identified.

III. Survey Assessments Findings

* General Observations.
* Environmental Observations (include potential problems for design changes).
* Existing Infrastructure (by building and as configured to the network).
* Existing Cabling (by building and as configured to the network).
* Existing Electronics (by building and as configured to the network).
* Training Issues.
* Summary of Findings.

IV. Recommendations for Infrastructure Upgrades

* General Recommendations.
* Infrastructure Upgrade Recommendations Overview and Rational.
* Site Preparations Recommendations (by building and as configured).
* Cabling Recommendations (by building and as configured to the network).
* Electronics Recommendations (by building and as configured to the network).
* Training Recommendations.
* Summary of the upgrade recommendations.

V. Recommended Implementation Strategies

* Site/Cabling Implementation Strategy: includes a schematic diagram and projected completion timetable.
* Electronics Implementation Strategy: includes a projected completion timetable.
* Workstation Implementation Strategy: include a projected completion timetable.
* Overall Location Upgrade Strategy: including a phased approach to allow for budget or staff support limitations, includes a projected completion timetable for each phase and interdependencies between phases.

VI. Estimate of Time and Materials (Listed)

* Site Preparations – including all incidentals (be specific).
* Cabling.
* Electronics.
* Other System Incidentals (be specific).

VII. Projected Costs

* Design
* Materials
* Labor

**Refresh Schedule:**

All procedures and referenced documentation identified in this document will be subject to review and possible revision annually or upon request by the HHS Delivery Center Domain Leads.

**Procedure Revision Log:**

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| --- | --- | --- | --- |
| **Change Date** | **Version** | **Change Description** | **Author and Organization** |
| 05/09/2001 | 1.0 | Initial creation | DPW |
| 08/1620/02 | 1.1 | Edited for style | Beverly Shultz |
| 12/13/2004 | 1.1 | Date Change | Tom Zarb |
| 11/03/2006 | 1.1 | Reviewed content – No changes | Doug Rutter |
| 09/17/2008 | 1.2 | Minor content change & edited style | Doug Rutter |
| 09/24/2010 | 1.2 | Reviewed content – No changes | Doug Rutter |
| 02/23/2011 | 1.3 | Reviewed content – No changes | Doug Rutter |
| 3/18/15 | 1.4 | Changed DPW to DHS | Bob Gordon |
| 03/07/2016 | 1.4 | Reviewed content – No changes | Aamir Qureshi |
| 04/15/2020 | 1.5 | Organization Name Change | HHS TSO |
| 07/20/2020 | 1.5 | Reviewed content – No changes | Bob Gordon, HHS Network |
| 07/28/2020 | 1.5 | Signature removed | M Koerber, HHS TSO |