DIGITAL MASTERWORK

# [SAMPLE] GNOC Knowledge Assessment Planning

**November 1999 Project for GTE GNI**
**submitted by L. Priest**

DIGITAL MASTERWORK

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## 1. Introduction

DigitalMASTERWORK (DM) has worked with GTE over the past year producing focused online training material for presentation through the AIDLearn™ system to GNOC Engineers and Technicians. Recently, DM was asked to revisit the curriculum planning phase of this training development to ensure good time and money are being spent to make training successful. DM examined the training effort through the lens of performance based Knowledge and Skill Profile (KSP) criteria as that discussed in the chapter below - Overview.

The results are detailed in the GNOC Engineer's KSPs chapter, while example KSPs are utilized to make assessment tests that can be programmed into AIDLearn™ in the final section. Relevant documents shared with DM from GTE are available in the Appendix for reference.

This document is viewed as "a work in progress" since the organization of the GNOC is changing constantly and new personnel practices are being put into place. Therefore, we encourage GTE training administrators to use this research as a base for moving forward and updating the training program.

We want to express our appreciation to the following GTE contributors for their time and effort in this project:

Donna Damiano
Frank Bennett
Adam Geminden
Steve York
Stephanie Reynal

## 2. Overview of Curriculum Planning

DM views efforts like GTE's GNOC Technician training in the larger context of what we refer to as *knowledge transfer solution planning*. This term grows from the belief that the knowledge base of anyone's job responsibility within an organization is a combination of the knowledge and skills they arrived with from outside the organization and **the knowledge transferred to them within the current organization**. Therefore, systematic enhancement of that knowledge and skill base is the *planning of training* that GTE trainers and managers are currently updating and revising..

GTE is already taking into account the challenges and varieties of training that meet your staff's needs, particularly in the GNOC. According to the xxx GTE document, training is being tracked from many angles to meet various needs:

- vendor off-site classes during working hours
- CD ROM delivered college-level courses during working hours
- college courses after hours off-site
- AIDLearn online web-based tutorials and performance support
- on-the-job training of new hires

To address the special needs of adult learners, particularly in a technical environment like the telecommunications industry, training delivery strategists plan to make every moment of training count, because every minute spent training is potentially a minute NOT being spent fulfilling customers' service requirements.

## Adult Learning Requirements

Characteristics of Adult Learners, from *The Adult Learner, A Neglected Species,* by Malcolm Knowles

- ❑ The rate of learning varies between individuals.
- ❑ Adults enter the instructional setting with considerable previous experience and learning.
- ❑ Individuals have different learning styles and preferences.
- ❑ In a group, individual participants may have a variety of goals for learning.
- ❑ Adults need to feel that they are learning to meet their goals.

Considering the list of adult learning characteristics cited, how can GTE plan training, assessment, and job development meet these needs?

A. Plan **long term goals** with your employees so they can see how their development can be appreciated and rewarded within your organization by job promotions, career development, and related moves between departments. The training and development activities you offer should be communicated to learners within the context of the long-term goals.

B. Know your learners and the expectations they might have for getting the most out of their valuable time spent in training activities. Let them tell you exactly what they need to improve their job performance by getting their feedback in **pre-instructional assessment**:
   – assess how fast they can read text, understand graphic illustrations, listen to instructions
   – assess what they already know about the topics and knowledge areas
   – gauge their skill level that they already have attained
   – find out what their managers are expecting of them on the job both in daily performance and in long term development

C. Develop a **wide variety of learning and assessment activities** to meet the multiple learning styles and expectations of your learners. Present to them an catalog of their choices and let them make individual study and assessment plans in concert with their manager's and job expectations. Incorporate the plans as part of regular yearly goals employees plan to achieve.

D. Evaluate and **assess the learner's achievement** within the authentic context of their job performance. Make the learning "real" and immediately useful in their daily activities.

## Performance Based Curriculum – the KSPs

Steps to formulate an overall performance-based training plan include:

1. Investigate and define measurable performance related learning objectives using performance assessment words like "learner will be able to identify, to solve, to construct, to compare…" rather than words like "learner will know, understand…"
2. Have objectives that can be measured with defined criteria based on performance standards and proficiencies.
3. Organize and track your objectives and criteria. You will find that over multiple job roles and responsibilities, the objectives and criteria become what DigitalMasterwork refers to as the **Knowledge and Skill Profiles** (KSPs). The inventory of these profiles can indicate all the areas where seemingly unrelated jobs are in fact related, and provide a **reusability pattern** that will make assessment and training modules meet multiple needs.
4. From the KSPs, formulate object-oriented reusable learning units of:
   - ❑ pre-assessment
   - ❑ learning activities and study plans
   - ❑ learning assessment
   - ❑ certification testing

5. Get continual feedback from learners and managers to help you refresh and retool your program offerings to keep pace with changing demands.

Discussed below are more details on developing the learning objectives and assessment criteria which form the building blocks of a solid training and development plan which DigitalMasterwork calls a Knowledge Transfer Solution based on KSPs – knowledge and skill profiles:

**K** - knowledge needed to perform well in a job role
**S** - skills necessary to perform well in a job role
**P** - personal traits required to perform well in a job role

Development starts with *investigation* of the job performance measures desired or currently in practice.

## KSP Assessment Investigation

The base piece of a successful curriculum plan is to find out what are to be the criteria by which the learners will be assessed – what is the gauge or measurement of their success at learning and performing on the job?

### *Investigate Assessment Currently Performed*

In the case of GTE's current priorities in training planning, one might ask what are the assessment methods currently used at the NOC? to determine job hiring? to determine pay raises?

Example: Do you use MBO management by objectives to set forth at least x# of goals for the employee to meet…for job promotion?

Example: Do you observe and have reports that person has shown leadership on the following x occasions?

Example: Do you have equipment certification? Do you have levels of certification? Has learner attended and passed the Beginner's 2-day course in xxx monitoring system with a score of xx out of xxx points on post-test?

Example: During internal classroom training, how is the student assessed? Presented x minute role-play with fellow participant of GTE's xx course? Passed final quiz with x answers correct out of y possible?

Example: How do you gauge customer satisfaction achievement of an employee? service level agreements? service recovery time? feedback from customers – questionnaires, service-termination tracking, voluntary anecdotal feedback, statistics of customers gained/lost?

Other investigation points might include:

- Externally delivered courses
- CD ROM based
- Outside schools (college or otherwise)

The results of DM's preliminary investigation includes some answers to the above questions:

1. GNOC sees its staff more as contractors, so no formal MBO program is in place for the staff. However, GNI does set annual MBOs and priorities for the managers who in turn share the objectives with the GNOC staff.

2. Supervisors monitor staff performance and report non-standard (good or bad) performance examples via memos-to-file and email to managers which are surveyed during annual staff reviews.
3. General performance measurements used for staff:
   -- how well staff handle an outage and how fast service is recovered and
   – how well staff work as team members and share knowledge and communicate with one another.
4. Training that must be scheduled is tracked at a single source (A. Geminden) and includes:

| |
|---|
| Tonics (LABS) |
| REMEDY OJT |
| Nortel CBT 2002 |
| Nortel CBT PO30 |
| Nortel INM Course # 5423 |
| Nortel OC12/OC48 OAM&P Course # 5530 |
| Nortel OC192 OAM&P Course # 5418 |
| Private Ascend training |
| Ascend Frame Relay Configuration Course # 20211 |
| Troubleshooting Ascend Frame Relay Networks Course # 20310 |
| Cisco and Cisco Works |
| Tellabs (5500 Titain DACS) Fundamentals Course # 55XFUN8 |
| HP Openview |
| TBS Overview |
| Metasolve TBS |

5. Scheduling of training is tracked, but any assessment results are not necessarily communicated to GNOC managers or supervisors. However, they know what performance gains to expect of staff who pass such training activities and increase their expectations for performance gains thereafter.
6. At this time, GNOC staff do not attend internal GTE training courses like Customer Service etc.
7. GNOC staff are expected to be familiar with and follow customer SLA procedures and abide by the standards (like 15 minute outage identification and dispatch) as published and available for review in the NOC.

### *Investigate KSP Descriptions Already Available*

Gathering and analyzing organizational documents can lead to a better understanding of the job performance expectations. Such documents can include: job descriptions and analyses from Human Resources or performance objectives from NOC managers and supervisors.

## KSP Criteria Formulation

### *Definition of Criteria*

Criteria are composed of three pieces of information:

1. knowledge/skill/trait area being measured
2. levels of measurement
3. observable or measurable examples of job performance per level of measurement

Criteria can be communicated clearly by tables to learners before they begin their Study Plan so they know exactly how their performance will be assessed. Criteria tables list levels of success across the top (examples: beginner/intermediate/advanced or not adequate/adequate/superior) and the criteria topics down the left side. Criteria observations and measurements use active verbs to express performance: "learner will be able to identify, to solve, to construct, to compare…" rather than words like "learner will know, understand…" The observations and measurements can build upon one another across the levels where the next higher level assumes the performance of the lower level, plus adds some performance objective.

### *Examples of Assessment Criteria*

**Criteria for knowledge:** Try to state the knowledge area and observable or measurable ways to gauge level of understanding of the piece of knowledge as it applies to learner's immediate job performance.

**Knowledge Criteria Example**

| Knowledge Area: ATM/Frame Relay | 1 - Beginner | 2 - Intermediate | 3 - Advanced |
|---|---|---|---|
| criteria 1 | Person can investigate customer problem and determine whether they have ATM service by the type of circuit code as differentiated from the xxx codes. | Person can not only determine the ATM service on the circuit, but also name the equipment varieties associated with ATM. | Person can explain the particular ways to spot troubleshooting on ATM circuits to another person. |
| criteria 2 | Person can name terms associated with ATM service. | Person can define terms associated with ATM service. | |

**Criteria for skills:** Try to state the skill and observable or measurable ways to gauge level of mastery of that skill as it appears in the learner's immediate job performance.

**Skill Criteria Example**

| Skills Area: Problem identification | 1 - Beginner | 2 - Intermediate | 3 - Advanced |
|---|---|---|---|
| Open Remedy trouble ticket about circuit malfunctioning | Can investigate and open up a somewhat inaccurate Remedy problem ticket within 15 minutes on average. | Can investigate and accurately open a Remedy ticket within 15 minutes on average. | Can investigate and accurately open a Remedy ticket within 5 minutes. |

Other examples of skills to assess in a technical training program include problem solving and customer service.

Examples of criteria of personal traits or characteristics needed for the job role might include teamwork or leadership.

## Successful Curriculum Deployment

To successfully deploy a *knowledge transfer solution*, i.e. your curriculum plan, some recommendations include:

- ✓ Explain your strategy of KSPs to the learners and managers and get their buy-in early
- ✓ Catch the learners' and organization's attention:
  - ❑ Produce a high-profile, immediate-need education module utilizing multiple delivery methods (AIDLearn, classroom, team project, web discovery, etc.)

- ❑ Give the module lots of aspects to catch multiple learning styles by using multimedia and human involvement
- ❑ Make a group activity out of using the module to create synergy and momentum
- ❑ Have learners put their new skills to immediate on-the-job use

✓ Have learners make Study Plans based on their job role's KSPs
- ❑ Have managers acknowledge and incorporate Study Plan achievement into their management plans

✓ Monitor and guide the use of the training
- ❑ Stay in touch with your learners and managers by visits and follow up
- ❑ Answer all concerns and suggestions in a timely manner to keep people's involvement and ownership of their plan

✓ Constantly report back to learners and managers the assessment findings by statistics and anecdotal evidence, both good and bad news, so you can refresh and retool the assessments as needed

If you plan, and communicate the plan to all concerned, and abide by the plan consistently, then you will be successful.

## 3. GNOC Engineer's KSPs

Since GTE documentation is mainly formulated around the technician's job description, we have kept that general outline in this section. However, ***knowledge*** is distinguished from ***skills*** and from ***personal*** traits. Where full measurable criteria were available and validated, they are listed in the table form as recommended. Where less criteria information is available, simply the KSP topic and general level of expertise is listed.

Information and documentation compiled here includes (see Appendix for samples):

- GTE GNI GNOC job requisition for new hire, November 1999, from S.York, and
- Interview notes August 1999 with GNOC managers about on-the-job requirements for knowledge and skills, from D. Damiano
- Interview notes November 1999 with GNI staff A. Geminden, F. Bennett, and GNOC Steve York and Stephanie Reynal
- Spring 1999 on-site observations at GNOC during Ascend training development

Re-analysis was applied by DM to distinguish *knowledge* from *skills* and *personal* traits.

DM analysis attempts to identify not only the required knowledge or skill, but also a level of competency and a measurement. The measurement can be assessed by testing, observation, performance outcome, etc. Eventually, each knowledge or skill should/would be identified with a level and measurement following these guidelines:

Criteria of measurement for all Knowledge, Skills, and Personal Traits:

| 1 = beginner | 2 = competent | 3 = expert |
|---|---|---|

The job analysis is contained in the following outline sections:

- Major Responsibilities
- Duties Include
- Beginners' Required Knowledge Upon Hire
- On The Job Acquired Knowledge**
- Beginners' Required Skills Upon Hire
- On-The-Job Gained Skills To Provide1st Level Support**
- Personal Skills**
- Experience Requirements Upon Hire
- Educational Requirements Upon Hire

** Indicates the sections where KSPs for organizational training purposes can be developed and examples of these KSPs are included herein. KSP criteria for items one**brings to the job** are useful for **pre-assessment** purposes. DM did not seek to discover extensive pre-assessment KSPs in this project phase.

## Major Responsibilities

"Qualified individual will be responsible for performing network management functions on GTE's Global Network Infrastructure. " [from job requisition]

**Duties Include:**

- 24X7 Network Monitoring,
- Troubleshooting & fault isolation
- Trend analysis to detect and react to potential problems before they impact customer traffic
- Dispatch and coordination of both parts and field service personnel
- React to and resolve customer and network issues as quickly as possible
- Assist others in a fast paced customer focused environment

## Required Knowledge Before Hire

Must have a broad "architectural" understanding of all of the technologies:

- INM (Nortel SONET)
- Naviscore (Ascend)
- CiscoWorks

"Must be familiar with the overall integration of individual switching, routing, and connection equipment across a geographically dispersed private network."

"Must be familiar from experience in the field with how test equipment is utilized for troubleshooting. Know about and how to troubleshoot with Field Testing Equipment. Have familiarity with the field testing equipment to provide support for the field techs."

## On The Job Acquired Knowledge

"Be familiar with switches/circuits, their configuration, and how they work including the telecommunication areas of":

- IP,
- Frame Relay,
- ATM,
- SONET and fiber optic circuits
- Central Office interface
- DMS – Dynamic Mapping System – used by GTE customers

Have HP Openview Event Browser knowledge.
Have Cisco Works Applications knowledge.
Have DACS/Titan/Network Manager knowledge.

KSP Criteria of telecommunications knowledge:

| (1) no knowledge | (2) broad familiarity | (3) in-depth understanding |
|---|---|---|
| (1) unable to explain knowledge item to others | (2) able to explain a knowledge item to a peer | (3) able to explain a knowledge item to a new person |
| (1) needs help reading and understanding vendor overview system manuals | (2) reads and understands vendor overview system manuals | (3) reads and understands vendor detailed system manuals |
| (1) needs help listing typical equipment on identified circuit | (2) identifies correctly typical equipment on identified circuit | (3) identifies exact equipment on identified circuit using provisioning records and management software(s) |
| (1) needs help writing description of problem into trouble ticket or customer memo | (2) writes identifiable description of problem into trouble ticket or customer memo | (3) writes up description and identifies any broader solutions into trouble ticket or customer memo |
| (1) needs help identifying need to perform loopback tests to troubleshoot port problems | (2) identifies need to perform loopback tests to troubleshoot port problems | (3) quickly identifies need and performs loopback tests to troubleshoot port problems |
| (1) cannot identify standard topology of equipment at a demarc during troubleshooting | (2) accurately identifies standard topology of equipment at a demarc during troubleshooting | |
| (1) cannot identify standard SONET facilities requirements to compare during troubleshooting | (2) identifies standard SONET facilities requirements to compare during troubleshooting | |

## Required Skills Before Hire

Since the job requisition lists "Excellent communication skills", the beginner GNOC new hire starts with a high degree of skill in this area. So the criteria measuring their performance has to reflect competency already. See Communication Skills criteria listed under on-the-job skills section below.

**Excellent analytical skills**

analytical performance to do:

- troubleshooting & fault isolation
- trend analysis to detect and react to potential problems before they impact customer traffic

**Team lead**

perform limited leadership responsibilities

**Competent with one or more of the Network Management Platforms associated with these technologies -**

INM (Nortel SONET)
Naviscore (NMS) (Ascend)
CiscoWorks
(?not IAM or EAM? – see experience requirements)

Pre-assessment suggestions from GNI staff:

- gauge keyboarding skills and recommend prescriptive training measures to improve if needed
- gauge prior field experience and knowledge of testing equipment and recommend prescriptive training measures to improve if needed

## On-The-Job Acquired Skills To Provide 1st Level Support

(What are 2nd and 3rd levels?)

**Performance level competent = have the ability to utilize such tools to perform troubleshooting and configuration functions.**

KSP criteria of Technical skills:

| 1 = beginner | 2=competent | 3=expert |
|---|---|---|
| (1) inconsistently utilizes Ascend monitoring tools to identify a problem within the SLA priority period | (2) consistently utilizes Ascend monitoring tools to accurately identify a problem within the SLA priority period | (3) always identifies a problem accurately within the SLA priority period |
| (1) cannot isolate ATM frame problems on Naviscore Ascend A/B statistics | (2) isolates problem and initiates correct escalation from Naviscore Ascend A/B statistics | |
| (1) perform loopback tests only with help to troubleshoot port problems | (2) performs loopback tests without help to troubleshoot port problems | (3) can instruct others on how to perform loopback tests |

**Skilled at ATM/Frame Relay Ascend Network issues - remotely**
detecting,
troubleshooting,
isolating,
dispatching,
escalating,
managing
clearing

**Skilled at handling outages in relation to the**
SONET Network,
ATM/Frame Relay Switches,
OAM&P Network,
DACS,
Telecom Network
Environmental Systems (i.e., fiber cut).

**Use INM to clear SONET issues.**
Have SONET knowledge to resolve issues, such as
managing,
identifying,
isolating,
dispatching
clearing

**Use IAM, which monitors the telecom network**

**TONICS knowledge for trouble identification.**

**OAM&P Network (Cisco Routers) skill at solving Router issues**
managing,
identifying,
isolating,
dispatching,

clearing, and
escalating

KSP criteria of Troubleshooting Procedures skills:

| 1 = beginner | 2=competent | 3=expert |
|---|---|---|
| (1) does not use good judgement in escalating a problem | (2) consistently uses good judgement in escalating a problem | (3) always uses good judgement in escalating a problem |
| (1) does not use logical methods to research a problem | (2) uses logical methods to research a problem | (3) can explain to others logical methods to research a problem |
| (1) infrequently remembers to apply relevant methods to solve similar problems | (2) frequently remembers and re-applies relevant methods to solve similar problems | (3) intuitively re-applies relevant methods to solve similar problems |
| (1) infrequently clears standard problems within the prescribed SLA priority period | (2) frequently clears standard problems within the prescribed SLA priority period | (3) always infrequently clears standard problems within the prescribed SLA priority period |
| (1) inconsistently researches the SLA priority period for an extraordinary problem | (2) consistently researches the SLA priority period for an extraordinary problem | (3) solves an extraordinary problem in a particular way because of SLA requirement. |

**Fill out Remedy Trouble Tickets**

Know how to process a Remedy ticket (for outages, change management, alarms, etc.).
Update or add an employee/customer/vendor profile in Remedy.
Document and track all activity through Remedy tickets.
Utilize Remedy database to research problems and supply comprehensive explanations and solutions

| 1 = beginner | 2=competent | 3=expert |
|---|---|---|
| (1) inconsistently utilizes Remedy database search capability to research a problem | (2) consistently utilizes Remedy database search capability to research a problem | (3) Utilizes Remedy database search capability to research a problem and provide a comprehensive explanation and solution |

**Excellent communication skills** means one is capable of articulating complex topics related to information exchanged both by phone and writing:

- When/how to dispatch route techs.
- Know when to contact customers and vendors

Communication performance is gauged upon

- dispatch and coordination of both parts and field service personnel - requisition of parts to the site.
- reaction to and resolution of customer problems in fast paced customer focused environment

Levels of communication skill measurement:

| 1 = beginner | 2=competent | 3=expert |
|---|---|---|
| (1) inconsistently communicates simple topics or directives by phone with internal personnel | (2) accurately communicates simple topics or directives by phone with internal personnel | (3) accurately communicates complex topics or directives by phone with internal personnel |
| (1) inconsistently communicates simple topics or directives by email with internal personnel | (2) accurately communicates simple topics or directives by email with internal personnel | (3) accurately communicates complex topics or directives by email with internal personnel |
| (1) inefficiently dispatches personnel or vendors without thinking through all the tasks | (2) consistently coordinates efficient dispatch of personnel or vendors by thinking through all the tasks. | (3) coordinates very timely quick dispatch of personnel or vendors giving them clear directives |
| (1) writes problem summary on trouble ticket which needs explaining and is incomplete | (2) writes problem summary on trouble ticket which adequately defines problem | (3) writes good problem summary on trouble ticket which can be used to solve problems in the future |
| (1) communicate in an inconsistent and untimely manner with customer for problem resolution updates | (2) communicate in a consistent and timely manner with customer for problem resolution updates | (3) communicate so well with customers for problem resolution updates that customer asks for this tech person again by name or are commended by name |
| | (2) communicate clearly in good English on customer follow up memos | |

## Personal Skills

Self disciplined upon hire
Self motivated upon hire
Work well in a team environment as both an individual contributor and a team lead upon hire
Capable of working closely with others in a team environment
Team leadership upon hire
Follow procedures:
- Know the escalation procedures.
- Know the vendor/manufacturer's documentation and procedures.
- Determine severity and priority of an outage and know the notification procedures associated to the outage.
- Know Ascend procedures

Assist others in a fast paced customer focused environment

## Experience Requirements Before Hire

Must have field experience working with one or more of the following technologies:
- SONET
- ATM
- Frame Relay
- IP routers (Cisco)

Competent with one or more of the following Network Management systems:
- INM
- IAM

- EAM
- Naviscore
- CiscoWorks

### Educational Requirements Before Hire

Bachelor's Degree is preferred but individuals with equivalent experience will be considered

## 4. Assessment Based on KSPs

In sections below we list example test questions and AIDLearn Interactive Learning Lab situations that can be utilized to assess job performance. This job performance is measured against the KSP criteria we outline in the previous section. Therefore, we list the relevant KSP criteria that the question or simulation "maps to." We use the GNOC's AIDLearn present selection of training content for reference:

GNOC Alarm Reference.**Nortel**.CLASSROOM.SONET \ …
- Introduction - tutorial[1]
- SONET Ring Architecture – tutorial
- OC-192 – tutorial
- OC-12 and OC-48 – tutorial

GNOC Technician I.**Ascend**.PVC Troubleshooting.Processes \ …Classroom

GNOC Technician I.**Ascend**.PVC Troubleshooting.Problem Identification \ …Classroom
- Introduction to a PVC – tutorial
- Introduction to Basic PVC Troubleshooting – tutorial
- Verifying PVC Problem – tutorial
- PVCs Relationship to the Physical Layer – tutorial
- Verifying PVC Problem – tutorial
- A PVC with Performance Issues – tutorial
- PVC is Down – tutorial
- Introductory Physical Troubleshooting Lesson
- A Physical Layer Problem – tutorial
- Near End Loop Back - Step by Step - procedures
- Trunk has PVCs with Performance Issues – tutorial
- Trunk is Down – tutorial
- Switch Unreachable – tutorial

GNOC Technician I.**Ascend** Troubleshooting \ … Interactive Learning Lab practices
- Trunk has Performance Problems 1
- Trunk is Down 1 (through Trunk is Down 2)
- Switch Problem 1 (through Switch Problem 3)
- Performance Problems 1 (through Performance Problems 7)
- PVC is Down 1 (through PVC is Down 4)
- Physical Problem 1 (through Physical Problem 2)

[1] This education object should be renamed so it can be identified for its topic; i.e. there might be lots of introductions to topics, which topic is this? Perhaps "Introduction to SONET."

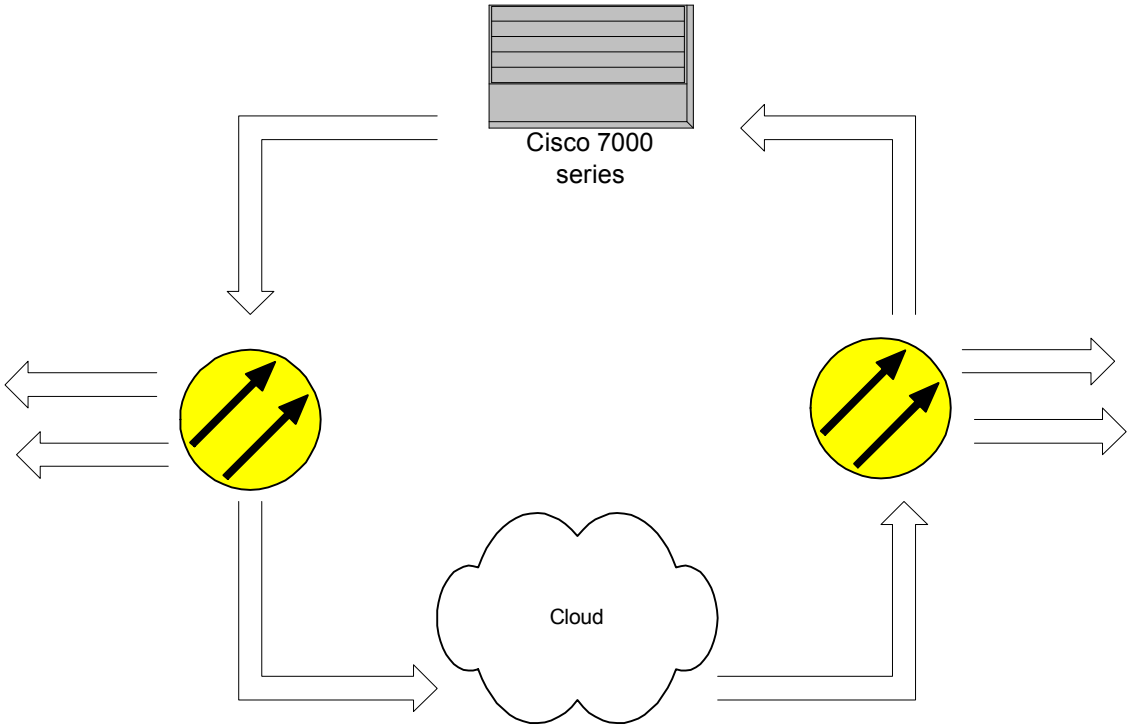
## Example AIDLearn Job Hire Pre-Assessment

Match the correct definitions to the terms listed:

| | |
|---|---|
| PVC | definition x |
| Trunk | definition y |
| Physical Layer | definition z |
| LoopBack | |

=======

On the following network diagram, identify and write the type of network component by its generic name in each space provided




========

Notice in the above two examples, you are asking the job candidates to do activities that can be observed: “match”, “identify”, and “write” and measured. These examples map to the Required Knowledge Before Hire:

“must have broad architectural understanding”

“must be familiar with the overall integration of…”

## Example AIDLearn Telecommunications Knowledge Assessment

========

Imagine that you are helping a new person in the NOC. Read the person's incorrect explanation below and choose the best correction you can suggest to them.

Incorrect Explanation - "Well, I figure the OC12 multiplexor has ports coming in from smaller channels and then produces a combined single channel, like to send out over the T1 circuit, which is a bigger pipeline."

correction A - "I think you mean to say 'over the SONET portion of the circuit', right?"

correction B – "I think you mean to say 'the de-multiplexor' since the T1 is a smaller circuit, right?"
========

The assessment question maps to the advanced KSP criteria "shows in-depth understanding by being able to explain a knowledge item to a new person."

The AIDLearn education object(s) where this question is covered include:
Introduction (to SONET) - tutorial

## Example AIDLearn Communication Skill Assessment

========

Imagine you are dispatching a field tech to the Cleveland SONET switch to figure out a port problem. Choose the best ending to your conversation (this can be in audio if needed)

ending A – "So to review what each of us is going to do: you are going to do loopback tests to the demarc, and if you find the problem is beyond the demarc, then you'll call me back and I'll escalate to the telco. Is that your understanding too?"

ending B – "So I'll call the telco now so they can send loopbacks to their equipment while you are there to troubleshoot. I'll give you the contact at the telco so you can communicate with them directly. How does that sound?"

=======

Follow up question to your answer above: Why did you choose your answer to which ending is best?

why A – "I always try to review our individual tasks and make sure that I am the central communication person so that I can follow the problem from start to finish."

why B – "I try to delegate tasks out so I do not get too swamped or mis-communicate when someone else can do it more directly."
========

The assessment question maps to the competent KSP criteria "consistently coordinates efficient dispatch of personnel by thinking through all the tasks" and "consistently uses correct procedures in escalating a problem."

The AIDLearn education object(s) where this question is covered include:
Performance Problems – Interactive Learning Lab practices

## Example AIDLearn Troubleshooting Skill Assessment

You find out from the monitoring system that the OAM&P reports a loss of synchronization and quality degradation between signal regenerators. Therefore, you look next to the _____ area because that is a problem with the _____ layer of the network.

A – STS and switch equipment because that is a problem with the physical first layer of the network.

B – circuit designations and provisioning area because that is a problem with the logical third layer of the network.

========

The assessment question maps to the competent Troubleshooting KSP criteria "uses logical methods to research a problem" and knowledge KSP criteria "identifies standard SONET components and OAM&P messages."

The AIDLearn education object(s) where this question is covered include:
Introduction (to SONET) - tutorial